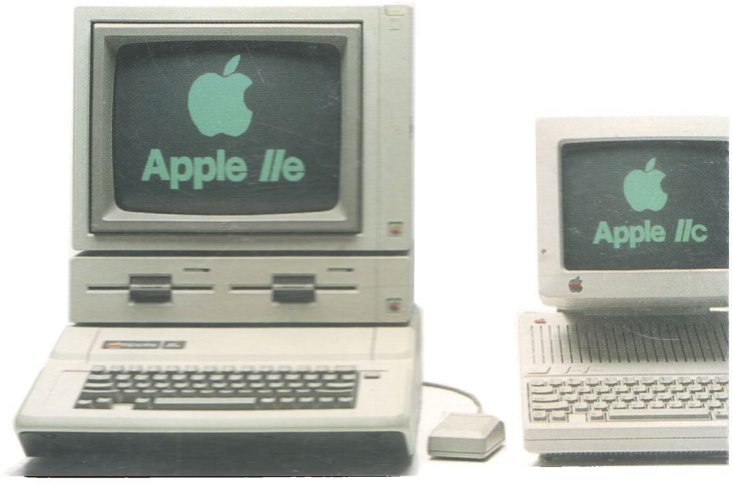
Recommended Retail Price $5.95

The Australian Apple Educational Software Directory 1985



THE AUSTRALIAN

APPLE EDUCATIONAL SOFTWARE DIRECTORY

1985

Compiled by

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Education Advisor
Apple Computer Australia

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N.B. This Directory has been compiled from information supplied by software and hardware manufacturers and distributors. Apple Computer Australia makes no warranty or representation concerning the information so supplied.

Inclusion of any package in this manual does not suggest or infer that the particular software package is sponsored or recommended by Apple Computer Australia.

Foreword

This Directory is the first listing of educational software available in Australia for the Apple II family of computers. The large number of programs available for the Apple is, of course, very desirable since it presents a very wide choice for the educator. However, it also means that few people have access to information on all the options. This Directory will provide the means to select appropriate software for classroom and home use.

The Directory results from numerous enquiries from teachers and parents throughout Australia, and the broad range of software listed will provide answers to many future enquiries. I believe this Directory will encourage Apple users to seek new applications for their computers in infants, primary and secondary classrooms. To complement the use of software in some subject areas descriptions of printed support material have been included.

To make the catalogue available to Apple users early in 1985 some programs have not been included. However, the major subject areas are represented and the Directory provides the starting place for software selection. Later editions of the Directory will provide descriptions of software in other subject areas.

If I have omitted one of your favourite packages please don't hesitate to let me know. Send details of the name of the program, Australian supplier, a few words about the program and the price. I am still finding groups in Australia who are developing software, and descriptions of their software will appear in subsequent editions as they come to my attention.

Pricing of programs and their descriptions are believed to be accurate at the time of compilation, but these may be changed without notice by the author, publisher or distributor. The prices quoted are those for educational institutions, and where the software is purchased for home use the pricing may be slightly higher.

May 1985 be a year to make your Apple II Computer an increasingly valuable educational resource.

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THE AUSTRALIAN APPLE EDUCATIONAL SOFTWARE DIRECTORY 1985

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SECTION A: SOFTWARE SUMMARIES

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**************************************************************************
*                                                                        *
*                                                                        *
*     Typical Entry:                                                     *
*                                                                        *
*                {Name of the Program} {Education Price}                 *
*                                                                        *
*                {Name of the Software Distributor}                      *
*                                                                        *
*     {                                                          }       *
*     {                  DESCRIPTION OF THE PROGRAM              }       *
*     {                                                          }       *
*                                                                        *
**************************************************************************
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Notes:

1. An asterisk before the name of the program means that it was developed in Australia.

2. The address of the distributor of the software is listed in Section B.

3. Some educational software is available through Apple Dealers, software outlets and educational booksellers.

4. Where two distributors handle exactly the same software package, the cheaper supplier is listed.

5. Software listed is believed to be readily available.

1. ADMINISTRATION PROGRAMS & TEACHER UTILITIES FOR THE APPLE II FAMILY

APPLEWORKS ($250)
Apple

AppleWorks combines a Word Processor, Data Base, and Spreadsheet in a new integrated software package for the Apple //e and //c. The Word Processor displays a typical letter or report on the screen the way it will appear in print, including on-screen centering, bullet points, and page breaks. Other key features: Search and replace, headers, footers, page numbering, boldface, underline, superscript, subscript, reads and writes ASCII files.

The Data Base is an enhanced version of Quick File with the same key benefits - fast operation and a built-in report generator for table and mailing labels. The enhancements include: faster sorting, up to 30 categories per file, up to 3 calculated categories per report, file merging, reads Quick File and ACSII files, writes ASCII files.

The Spreadsheet has a maximum size of 999 rows by 127 columns with a full complement of built-in functions such as "net present value" "if", "choose", and "lookup". Some of its features include: individually variable column widths, fully adjustable decimal points, dollar and percent sign formats for values, centering of labels within cells, cell protection, sorting of rows either alphabetically or numerically and 15 place numerical accuracy.

* COMPUTER DIARY ($30)
Chopping, Mr. E.G.

Using only four keys you can gain access to any date in the current year, enter an item and have it stored on disk. At the beginning of each month you can get a printout to use as a memopad. A whole month can be scanned on the screen, the number of days between any two dates calculated or have a cyclic event automatically stored. A data disk for any year can be created.

* SMART - THE CASH COMPUTER ($150)
Computers Programs, Machines & Services

The cash computer provides an easy to use system for managing a small business. It provides functions to control stock on hand, individual items sold, re-order levels, banking summary, debtors statements, calculates change and keeps track of cash, cheques, cards and change. Suitable for many applications within schools.

* THE BOOKKEEPER'S FRIEND ($85)
Computer Programs, Machines and Services

A cash book which is easy to use and fully menu driven. It supports profit and loss balance sheets, allows the entry of receipts and expenses to produce trading profit and loss balance sheets and provides a variable chart of accounts. A useful program for administration and for economics/commerce students.

* TABLETIME ($85)
Dataflow

Tabletime is an Australian computerised timetabling program designed for use in high schools and colleges. The program uses a matrix timetabling method catering for up to 60 periods/week or cycle, up to 180 subject lines, an average of 10 teachers/line and up to 180 teachers and specialist rooms. Tabletime produces timetables with minimal or no clashes in the form of a summary timetable.

PARENT REPORTING ($29.95)
Dataflow

Allows the teacher to send "personalised messages home to each student in the class. Each message includes 8 different teacher-defined subjects: English, Maths, work habits, attitude, etc. Each subject may be given on of 15 different "grades". There is also an option for a personal message. (A printer is necessary.)

* E.A.S.I.E.R. (about $500)
Freeman Software

This administration package was developed in Australia for school application. It consists of five diskettes and an extensive user manual. It has been designed for use by teachers and administrators to reduce the administrative tasks required of them in primary and secondary schools. The five diskettes are titled: administration master, results master, statistics disk, reporting disk and a mailing and other lists disk. Student information is stored on separate student data disks, created on blank floppy disks. Each disk holds records for up to 100 students and it is possible to cater for up to 300 students at any year by using extra disks. Security of information is accomplished using "passwords".

The tasks covered by the E.A.S.I.E.R. system are described below. It stores, displays and prints complete student records, allowing access by name or record number and allows easy updating of information as students move through the school. It produces house, form, tutor group and subject lists. It stores, displays and/or prints academic results by subject, compiles and prints academic results in ranked order for each subject. Calculates means, standard deviations and simple correlation coefficients for each subject and produces frequency histograms for each subject. Printing includes term reports, address labels and compiled information necessary for the Education Department's annual statistical collections. The program calculates student ages for sporting events, alerts for family or medical problems and prints information on ethnic details, transport and student movements.

* MARKBOOK (Public Domain, send disk & $5 for postage & handling)
Gainford, Mr M.

An electronic markbook which will store up to 200 kids or one form at a time. In the 48K version, 28 columns of marks can be displayed and in the 64K version 54 columns of marks. Functions include entry and editing of marks, sorting alphabetically, rank order, standardisation of marks and the best 10 unit aggregate. The markbook may also be used to store student subject selections as a precursor to timetabling.

* COMPUTER ASSISTED TESTING ($60)
Logistics

This program analyses multiple choice tests to provide raw scores, percentage scores, difficulty and discrimination indices. Performance histograms are also provided.

* SCHOOL RECORDS & REPORTS ($150)
Lothlorien Software

School Records and Reports is a program written specifically to keep track of each student's progress throughout the year in up to nine different subjects. Marks for six tests can be recorded in each of these nine subjects. As each new mark is entered, the student's weighted average mark is calculated and displayed at the bottom of the screen. Using this program the teacher or administrator can obtain a print out of each class in order of merit in each subject, as well as on overall performance. This is particularly useful for parent/teacher meetings, staff meetings etc. Lists of students in each form can be sorted alphabetically and printed out (assuming a printer is hooked up to the Apple).

The program also provides a print out of reports which can be printed on letterheads to be sent home to parents. Teachers write their own personal comments. Each diskette can record the reports for 215 students, thus making it easy to keep each form on its own diskette. Where the numbers of students are smaller, forms can be grouped together as desired.

THE CLASS "MANAGER" II ($138.50)
Mastery

The "Class Manager" is designed to work for the teacher to accurately record, calculate and document individual student records. This program incorporates many important features:

- Allows for the creation, storing, reading and altering class files
- Flexibility for use at any grade level or in any subject
- Flexibility for recording various mark categories (e.g. test, class participation, exam, etc.) selected by the user and weighted in the final mark according to a figure determined by the user
- Class lists and marks may be displayed at any time
- Accumulates and saves separate student marks each term for up to 4 terms and provides a final average for each term and for an entire year
- Marks and weightings can be changed at any time
- Provides printed output at any stage for any class
- Complete documentation is included with user hints and notes
- Reports for the entire class or for each individual student
- Print statistics including class average, median, standard deviation and mark distribution breakdown
- Option to rank students
- Operates on a variety of printers
- Re-scale a student's mark or term average
- Print out the honour role for any subject

* COMPUTERISED ADMINISTRATION SYSTEM ($45)
Messing Software

This system is made up of the Class List System and the Welfare System. They augment the Mark Book which is available as a public domain diskette. The Mark Book program was developed to store the sort of records kept by subject departments about the academic progress of their students. The data is stored in class groups. The Class List System stores student information, class lists, attendance and works in conjunction with the Mark Book. The Welfare System stores information about the student and his family background. A fourth program "Computerised Reports System" is also available and this collates the information from the Class Lists System and the Mark Book System.

EA GRADEBOOK ($59)
Micro Nationwide

A quick and easy-to-use program, GRADEBOOK keeps percentage grades for as many as 20 classes of 36 students with 36 test or assignment scores for each student. It may be expanded to accommodate more students or more assignments. Students may be listed in any order, and names can be re-alphabetized quickly at any time. Assignments can be weighted and class rosters can be transferred to new files automatically. Class ranking and standard deviation may be calculated. Grades can be averaged on a quarterly, semester, or yearly basis. Individual or class score averages are always available for review. Complete printed documentation is included, however, directions in the program prompt the user. All information is available on screen or can be printed.

OMNIS DATA BASES (about $300, $450 and $650)
Microware

There are three powerful data base programs OMNIS I, II AND III. Omnis 1, The File Manager, works like an electronic files and allow the user to design record cards. Omnis 2, The Information Manager, is a complete tool for the managements of information. Omnis 3, The Database Manager, is a complete applications generator including a relational and hierarchical system. It is easy to upgrade from one package to the next.

* MARKBOOK ($2.00 for members - provide your own diskette)
NSWCEG - Disk #26 or contact Messing Software

A program developed by John Messing to store the sort of records kept by subject departments about the academic progress of its students. The data is stored in class groups although the system does allow operations involving several classes. Each student's record contains space for surname, given name, IQ, 12 - 3 digit scores, 24 - 2 digit scores and 2 to 4 assessment results. All student records in a class are kept in alphabetically order. Using the supplementary program the following may be obtained: rank order lists, report with comments, standardize across classes and transfer students. A full description of this program occurs in Information Transfer Vol.3 No.2, July 1983 and instructions are included on the diskette.

* THE RESULTS ANALYST ($30.00)
Passionfruit

This disk enables the teacher to perform a series of powerful evaluations on multiple choice testing. Whilst it also acts as a correcter of tests, its main benefit is that it rigorously analyses the strengths and weaknesses of individual questions. In this way, a teacher can build up a set of good questions and be able to eliminate weak ones or modify them as needed. Some understanding of basic statistics is needed as is a printer.

BRIDGE
Ramware

A program to transfer PFS files to text files.

CACTUS GRADE BOOK ($54.50)
Science Education Resources

Maintain student data, unlimited number of classes, 60 students in each class, 35 records per student. Easy to use.

TESTCALC SYSTEM - The Academic Assistant ($770.00)
S.R.A.

This program will score multiple choice tests (up to 5 response options), prepare test statistics including item analyses, frequency distributions and correlations. The system will serve 200 students - up to 20 scores per student and 100 items per test.

* Mark Aid ($10 including diskette)
VICTORIAN DEPARTMENT OF EDUCATION

A program designed for teachers to facilitate their assessment of students which allows the teacher to initially establish a class list and then add and delete students to this list as the need arises. Given a set of examination marks, the mean and standard deviation are calculated and these are used to create a set of standard scores for each student. The teacher can select another mean and standard deviation for reporting and the students' marks are adjusted according to their rank order. Letter grades may be added to indicate a numerical mark. The program is formatted for a 40 column screen and it has an excellent built-in editor. Results may be printed on to an 80 column printer.

* STRATGRAPH FILER ($45)
Zylab

This package has been successful in the Victorian market over the past two years. It allows users to file alpha and numeric data, carry out statistical analyses and review these results on the high-resolution screen. The analyses include standardization of scores and reliability calculations. The high-resolution graphics display may be dumped to a suitable printer.

2. LIBRARY SOFTWARE FOR THE APPLE II FAMILY

* COMPUTER AND SCHOOL LIBRARIES: AN ANNOTATED BIBLIOGRAPHY ($13.00)
Riverina CAE, Centre for Library Studies
PO Box 588, Wagga Wagga 2650

This two hundred page annotated bibliography provides a guide to the literature available, as of August 1983, on the use of computer in school libraries.

* LIBRARIAN'S ASSISTANT - LOAN SYSTEM ($150)
Lothlorien

The Librarian's Assistant keeps track of loans and returns of material from the library. It also has fast retrieval of information by keyword search and will provide a hard copy. The print-out facility can also produce a list of borrowers who have overdue books or articles. Each diskette will hold about 2100 loan records.

* THE LIBRARY CATALOGUE ($150)
Lothlorien

The program provides a means of keeping a complete and up-to-date listing of all material in the library. The entry of new material is fast and simple and an editor is provided so that changes may be easily made. The search facility allows items to be found under any of the sub-headings. The print-out facility can be used to make card records of the items in the library. Each diskette will store up to 2100 items.

* ARCHIVE - BIBLIOGRAPHY - FILING SYSTEM ($150)
Lothlorien

This program allows information to be stored under 10 user defined headings. The last of these has an automatic accounting function built in so that items may be costed. An extensive search facility is included. Information on 1050 items may be held on a single diskette.

* MICRO-COMPUTER LIBRARY SYSTEM ($4000-$6000)
Lothlorien

An on-line circulation system which make use of a Corvus hard disk and an optional bar code reader. The system will handle 30,000 to 35,000 items and 1,000 to 5,000 borrowers. There are eight sections in the software: the circulation system, overdues, the catalogue system, borrowers data system, password master, public access catalogue, bar code print-out (optional) and floppy disk back-up recovery system.

* PROLIB (about $500)
Protext Software Services

PROLIB is a computerised library system which was developed in NSW especially for schools. The main purpose of the program is to provide a speedy and accurate method of handling the borrow/return functions of a library. The minimum configuration required is 48K and a single disk drive. This configuration supports 600 students, 40 classes and 10,000 books and normal library functions are performed without changing disks. More memory gives greater capability.

PROLIB can be operated entirely using the computer keyboard but also has an option to use a barwand reader which is used to read barcodes on pre-printed labels which are affixed to each book and student library card. Features include: circulation control, maintenance of student and book files, list unused student and book numbers, management information, statistics and stocktake.

BOOK TRAK ($1319)
S&M Supply Company

Book Trak consists of five sections: circulation ($727 + barwand), cataloging ($182), magazine control ($182), order typing ($182) and card & label printing ($146). The circulation program takes control of up to 65,000 item for up to 10,600 students and 800 faculty members. It provides daily overdue notices and take inventory using a barwand. The cataloging section stores each book's call number, author, title paragraph, collation, ISBN or LC number, accession number and 4 subject headings. New books can be readily entered and then printed out for cards and labels. Magazine control stores 11 categories of information for an unlimited number of periodicals. Orders for books periodicals and other publications may be generated with the Order Typing program. Catalogue cards and labels may be custom printed.

3. TEST MAKERS FOR THE APPLE II FAMILY

EDUCATION CLASSICS ($35.00)
Apple Computer

The Shell Games includes 3 computer aided instruction (CAI) programs:
- Mr. Multiple (multiple choice quizzes)
- Professor True (true-false quizzes)
- Match Machine (matching items)

These quizzes cover a range of subjects from history, to science, to trivia. Because The Shell games disk also contains its own Editor, you can choose your own quiz problems to place into each "shell". And you don't have to be a programmer in order to create highly successful quizzes. In a few minutes, you can enter a complete quiz into any one of the three quiz programs. Revisions can be made just as quickly. On the reverse side of this disk is the program "Elementary, My Dear Apple".

* TUTOR
Consolidated Software Development

TUTOR is a Computer Managed Instruction System with a subject-orientated approach to Learning. Any number of diskettes can be created by the teacher (or the student) with a separate subject (or subject unit) on each diskette. Once the full range of questions has been entered upon the diskette a test can be set up upon request. This can be a student self-test (timed or untimed) or a teacher-controlled test (timed or untimed). Questions for each test are selected at random from previously organised question groups. Associated with each group is a teacher-entered percentage. This percentage is taken into account when selecting questions each time a test is requested. On completion of the test, the student is provided with references for wrong and uncertain answers. TUTOR handles:
- Any number of subject areas each on its own diskette.
- Up to 80 questions on each diskette.
- Questions grouped according to the user's requirements.
- Test/examinations structured according to the user's requirements.

THE GAME SHOW ($49.95)
Edusoft

An educational tool for vocabulary development, this program uses animated colour graphics with the appearance of a TV game show. Varied subjects - biology to famous cities to nursery rhymes to advanced vocabulary and more. An easy to use authoring system allows you to add your own subjects. Lessons in 15 subject areas are included with the package. Additional Subject Diskettes (at $21.95) include: WIN WITH WORDS 1:(6 to 9 years) - Language, Science & Social Studies, WIN WITH WORDS 11: (9 to 11 years) - Language, Science & Social Studies, PEOPLE, PLACES AND THINGS: (9 to adult), YOU AND YOUR WORLD: (6 to 9 year) and FOREIGN LANGUAGE WORDS - featuring Spanish, French and German.

TIC TAC SHOW ($49.95)
Edusoft

This animated quiz show interacts with 1 or 2 players of any age as the program entertains, motivates and teaches. Comes with lessons in 14 subjects from Myths to Math. Use the authoring system to write lessons - no computer knowledge needed. Additional Subject Diskettes at $21.95 include: FUN WITH FACTS 1: (4 to 7 years) Language, Math and Social Studies, FUN WITH FACTS 11: (6 to 9 years) Language, Math and Social Studies, HISTORY: (9 to adult), YOUNG EXPLORER: (4 to 7 years) and FOREIGN LANGUAGE Q & A (all ages) Hundreds of subject questions in foreign languages featuring Spanish, French and German.

MASTERMATCH ($49.95)
Edusoft

Compete with the computer or a partner as this quiz show invites you to find logical matches in images and words under numbered mystery squares. Players use visual memory, factual knowledge and reasoning skills to win points. Use the authoring system to create your own lesson using pictures, concepts and words. Features: combined pictures and words aid visual learning. Memory is enhanced whilst learning vocabulary and concepts. Flexible teaching strategy is adaptable to any subject area. Additional subject diskettes are available for $21.95 in BASIC SKILLS (6 to 9 years), SCIENCE AND MATH (6 to 9 years), MATH AND SOCIAL STUDIES (9 to 11 years) and FOREIGH LANGUAGES Spanish, French, German and Japanese.

CREATE A TEST: Program Disks ($89.95) Question Disks ($49.95)
Edusoft

An excellent Canadian program ideally suited for teachers, parents and students of all ages. A computer program that makes perfectly formatted tests in 15 minutes. The system presently has a data base of about 5,000 questions (14 Question disks) of Junior and Senior Chemistry and also 2,000 questions (5 Question Disks) of Junior Science. Write your own question disks with built-in text editor. This program can print almost any kind of question including true-false, multiple choice, fill in blanks, matching, and problem solving. Question disks with over 400 questions each:

CHEMISTRY for High School	BIOLOGY for High School
CHEMISTRY Advanced (10 disks)	PHYSICS...Heat, Light & Astronomy
PHYSICAL SCIENCE for 9th grade Physical Science	

NOTE: Question disks require Program disk.

* QUIZ MASTER
Higbie Software

Quiz Master is an authoring system allowing an instructor the fullest freedom in designing and implementing computer quiz/tutorials at any educational level, on any topic. The user and instructor need have no prior knowledge of computers or computer languages. The package includes and editor disk and a question disk. These disks are self-booting and should be used to generate working copies. Neither disk is copy protected and a disk-copy utility is included on the editor disk.

COMPUTER BASED INSTRUCTION (CBI) ($120.00)
Logistics

An easy to use instructional package designed to allow teachers to produce computer lessons and tests.

* UNIVERSAL TUTOR ($75.00)
Lothlorien

The Universal Tutor is a program designed to utilise the multi choice answer system used in many schools and also in the Higher School Certificate examination in N.S.W. The question is presented to the student along with the four alternative answers: A, B, C, & D. The student indicates his choice by typing in the appropriate letter, and then pressing "return". Should the student repeat any particular set, he will find that the answers are in different positions and that the questions themselves are presented randomly. Entry of new material is simple. The flashing cursor is always in the right place to prompt entering of the question and then the four alternative answers.

* THE RESULTS ANALYST ($30.00)
Passionfruit

This disk enables the teacher to perform a series of powerful evaluations on multiple choice testing. Whilst it also acts as a correcter of tests, its main benefit is that it rigorously analyses the strengths and weaknesses of individual questions. In this way, a teacher can build up a set of good questions and be able to eliminate weak ones or modify them as needed. A printer and an understanding of basic statistics is needed.

THE ELECTRONIC FLASH CARD ($46.00)
Science Education Resources

Allows use of a TV or monitor as a flash card utility. Supports user-created flash cards, math, vocabulary, question/answers, foreign word translations, etc. Supports foreign characters, accent marks and updatable partial stock format.

TESTCALC SYSTEM - THE ACADEMIC ASSISTANT ($770.00)
S.R.A.

This program will score multiple choice tests with up to 5 response options, prepare test statistics including item analyses, frequency distributions and correlations. The system will serve 200 students - up to 20 scores per student and 100 items per test.

SEATWORK GENERATOR ($350.00)
S.R.A.

A program to allow the computer to print out exercises on any of 316 math skills. Exercises are generated at random. Skills cover the following areas: the four operations on whole numbers, fractions and decimals, place value, ordering and comparing numbers, rounding, exponents, percentages, ratio, proportions, measurements, formulae, expressions, equations and integers.

* MULTIPLE CHOICE QUIZ ($10.00)
Victorian Department of Education

A suite of two programs to maintain and test sets of multiple choice questions which is totally menu driven. The user does not need to refer to any Apple documentation or utility programs. The system has the following features: high speed machine code program, invalid response lockout, prompted file selection, inbuilt text and numeric editors, 120 characters per question, 4 answers of 37 characters each and space for approximately 250 questions per disk. The program may be used to prepare tests for students in years 5 to 12 for most subjects.

4. COMPUTER AWARENESS FOR THE APPLE II FAMILY

COMPUTER APPLICATIONS PROJECT ($75.00)
Addison Wesley

The four programs included in the Computer Applications Project show how computers are used in our society and include: Airline Reservations, Personal Banking, Supermarket Stock Control and Taking a Census. There is a student book providing background information, exercises and sample questions for each of the applications. Each package contains four student books, a teacher's guide and two diskettes (master and back-up). Extra student books in packs of 5 are available.

APPLE PRESENTS APPLE (provided with the Apple)
Apple Computer

Available in three forms for the Apple II+, Apple IIe and Apple IIc. This program introduces the new user to the keyboard and how to use the various keys. Provided with the Apple IIe and Apple IIc. Readily copyable.

* INSIDE THE APPLE (Public Domain)
Apple Computer

The is a graphics programs explaining the relationship between the main components of the Apple. It is in two forms, the first a continuous demonstration with text, the second graphics only to be used as a group demonstration. This disk is AppleSwap Disk 1.

MICROCOMPUTERS IN EDUCATION ($520)
Ashtron Software

A collection of training materials that helps teachers and administrators conduct their own in-service workshops. It includes 200 slides, a leader's guide and a participant's workbook.

BASIC COMPUTING (Student's book $3.80 each, Teacher's $4.30)
Ashtron Software

This package consists of six workbooks suitable for grades 1 to 6. Each 64 page workbook features exercises to prepare children for use of the computers. Exercises include: thinking like a computer, what is a computer, problem-solving, understanding process, giving directions to a computer, flowcharts, parts of a computer, using the computer, computer programs, input and output and computer terminology.

COMPUTER LITERACY: INTRODUCTION ($49.95)
Control Data

Designed to give a basic understanding of computers and how they are used in business, industry and society.

DATABASES ($69.95)
Control Data

This program introduces students to data bases and how they are created and managed.

STORAGE AND MEMORY ($69.95)
Control Data

The program shows how information is stored in a computer.

THE COMPUTER KEYBOARD ($69.95)
Control Data

Introduces students to the use of a computer keyboard and its role in entering information into a computer.

HOW TO OPERATE THE APPLE IIE ($65.95)
HOW TO OPERATE THE APPLE ($65.95)
Imagineering

3 Audio Cassettes and an Operator's Guide. The system will teach the essential operations of an Apple IIE or Apple II+. In three one to two hour sessions the programs will explain how to use each key, load, run, save, copy and modify programs.

INTRODUCTION TO MICROCOMPUTERS ($59.95)
McGraw Hill

An introductory package suitable for primary or junior secondary students covering simple computer terminology, parts of the computer and keyboard skills. Teacher's notes and student activity sheets are included.

COMPUTER LITERACY INSTRUCTION PROGRAM ($69.00)
Micro Nationwide

Developed as an inservice aid for teachers, administrator, etc. Lessons include: language, booting, the keyboard, the computer as a calculator, CAL (drill & practice, tutorial and simulation), setting-up and managing the microcomputer and the selection and evaluation of software.

FIRST ENCOUNTERS ($98.00)
Micro Nationwide

This program for primary children contains both computer and classroom activities. Children use logic and problem-solving techniques to develop simple programs. The program includes four matching or sequencing card games to introduce computer terms and language, keyboard skills and how to start, run and turn off the computer. Also included are 5 keyboard charts for students to practice keyboard skills while not on the computer. Ten computer miniprograms give students the opportunity to experiment with BASIC. A diskette containing two programs, the first to check the child's understanding of computer terms and another to evaluate the child's comprehension of computer concepts is included.

CAREERS IN COMPUTING ($83.00)
Micro Nationwide

Four full-colour filmstrips covering a variety of careers in computing. The areas covered are: programming, data processing, hardware development, service and peripheral careers.

COMPUTER LITERACY AND UNDERSTANDING ($89.00)
Micro Nationwide

Four full colour filmstrips and four audio cassettes covering computer literacy. The subjects of the filmstrips are History of the Computer, Development of the Modern Computer, Todays Computers, What they are & How they work, Flowcharting and an Introduction to Programming.

OPERATING THE MICROCOMPUTER ($89.00)
Micro Nationwide

A videocassette to help students and teachers to operate the Apple. Also included in the package is a leader's guide, 5 user's handbooks, 3 reproducible activity sheets and 1 answer sheet. Topics covered include: turning on the Apple, Inserting the disk, running a program, stopping the program and recognising loading problems.

MICRO DISCOVERY ($265.00)
Science Research Associates

Comprises two diskettes, 20 student worktexts and a Teacher's guide and is aimed for grades 5 to 8. The program gives an introduction to microcomputers without technical jargon.

MICROS MADE EASY ($265.00)
Science Research Associates

This package includes three diskettes, a manual and a start-up chart. The first diskette includes explains the functions of a computer, keyboard skills, the abilities of the computer, parts of the compuer and preliminary activities for programming stressing sequencing of commands. Disks 2 & 3 concentrate on BASIC programming.

COMPUTER DISCOVERY ($265.00)
Science Research Associates

A package suitable for grades 6 to 12 covering the fundamental understanding of computers. Topics include: computer history, hardware and software concepts, writing simple programs, and the computer's role in society. The package includes a diskette, teacher's guide and 20 student workbooks.

5. KEYBOARD SKILLS PROGRAMS FOR THE APPLE II FAMILY

MASTERTYPE ($60)
Ashtron & Imagineering

This program is in the form of an arcade game in which the letters, and in later exercises the words, appear in the four corners of the screen and the operator is required to press the keys before they move in to destroy the base at the centre.

* KEYBOARDING ($40)
Bishop

A program to instruct students on the use of the keyboard in a series of twenty-nine lessons. Each set of exercises must be completed three times correctly before the student is allowed to proceed to the next set. The order in which the new keys are introduced follows the order used in the document "Keyboard Skills" which is well known in Transition Education in N.S.W. After completing each group of lessons students work on a speed test. This program is easy to operate and could be used with pupils from grade five onwards.

KEYBOARDING FOR INFORMATION PROCESSING ($69.95)
Control Data

This program is designed to develop keyboard skills. Students recieve instructions on the screen as they work at the keyboard. Extra drill material is provided in the accompanying book.

* TYPE ($45)
Logistics Software

Type is a touch typing tutor containing thirty-four exercises. It is extremely easy to operate and the majority of the exercises are based on proper words. There is no speed component until the later exercises. The exercises are well graded and an incorrect entry produces a beep and is not accepted. The keyboard is displayed on the upper section of the screen at all times and the next letter to be entered flashes. The exercises cover the three rows of letters but not the numbers. The most recent version covers upper and lower case on the Apple IIe.

TYPING STRATEGY ($49.95)
Imagineering

This program uses an animated keyboard on the screen that will show which keys and letters to press without looking at your fingers. Animated hands show you which fingers to use while typing. Games are provided to help increase speed.

KIDS ON KEYS
Imagineering

Three exciting games suitable for 3 to 9 year olds, that teach the location of letters and numbers. In the first game, letters and numbers rain down the screen and the child finds the matching key before the image disappears. The second game, colourful pictures travel down and before they vanish the child has to type in the correct word. In the third game, the child must match the correct picture to the word that flashes up.

WIZTYPE
Imagineering

The Wizard of Id and Spirit animate this keyboard skills program featuring sentence and paragraph typing, adjustable speed and different types of drill. Players can make up their own lessons.

TYPING TUTOR II ($42.95)
Imagineering

The Typing Tutor program displays the letters and symbols at the top of the screen. Those letters that have been mastered are shown on the left, those currently being tested in the middle, and those yet to be introduced on the right. Progress may be evaluated using single keys, paragraphs and tests. Constant feedback is given on speed and accuracy with problem keys stated. Up to 49 student records may be stored and accessed by a special password. The teacher may add up to five more tests or alter the three supplied. There is no graphical display of the keyboard, nor instruction on which fingers are to be used for which keys.

* TYPING TUTOR ($50.00)
Prologic

This program contains a series of practical typing lessons developing students keyboarding abilities in selected keys, commencing with the Home Row Keys on a standard QWERTY keyboard and progressing through the twenty-two most commonly used keys. There are two main objectives. First, vowels are introduced as early as possible to enable word formation so that practice drills include words. Second, keys used in Apple Logo are also introduced at an early stage. Teachers may set-up their own lessons of characters, words or phrases.

* TYPEQUICK ($77)
Typequick

A professional keyboard training course in 10 lessons. Each lesson starts with a recap and warm-up session of the previous lesson. The program monitors each keystroke for speed and accuracy with an audible tone notifying errors. The student's guide contains a set of preliminary instructions on posture, stroking technique, etc. Refresher lessons are provided to maintain or build the graduate's speed and accuracy.

6. GRAPHICS PROGRAMS FOR THE APPLE II FAMILY

MOUSE & MOUSEPAINT ($184 FOR //e, $122 for //c)
. Apple Dealers

This package is a combination of hardware and software. The AppleMouse provides a simple way to draw graphics on the screen. Options include text, free drawing, circles, squares, different colours, moving around on the screen and the ability to blow-up a display to alter finer details. The mouse is also utilised in some other graphics packages and educational software.

POWERPAD ($166.95)
Ashtron Software

The Powerpad is a tablet with a 305mm x 305mm touch-sensitive surface allowing free-form graphics. By moving the stylus or finger across the surface, graphics appear on the computer screen. A variety of software packages with overlays for the Powerpad support this product.

PRINT SHOP ($69.95)
Imagineering

The Print Shop enables you to write, design and print greeting cards, letterhead, signs and banners. The program is menu-driven and supports the joystick, Koala Pad or AppleMouse. Eight type styles in multiple sizes are available and lettering may be proportionally spaced or superimposed on any picture or design. Nine border designs, ten abstract patterns and dozens of pictures and symbols are provided. A graphics editor allow creation of original logos or pictures. (Apple II+,IIe,IIc)

KOALA PAD ($110.00)
Imagineering

The Koala Pad is a small touch-sensitive tablet. A finger or the stylus provided may be used to draw on the pad and the picture is transferred to the computer screen. A good introduction to graphics. Several software programs are available to support the Koala Pad.

GIBSON LIGHT PEN ($199)
Imagineering

This light pen together with the two diskettes form a powerful graphics package. The software includes: Pen Painter, Pen Animator, Pen Musician, Pen Designer and Pen Track.

COMPLETE GRAPHICS SYSTEM ($97.50)
Imagineering

This includes a drawing module that allows a paddle or joystick to be used to draw on the Hi-Res screen. Options include automatic filling with over 100 blended colours, a paintbrush that turns the cursor into one of nine different size and shape brushes. A text module allows text to be placed anywhere on the screen. The 3-D module lets you create, view and manipulate 3-D objects. (Also supports the Graphics Tablet.)

ADDITIONAL FONTS ($28.50)
Imagineering

Forty extra fonts for use with the "Complete Graphics System". Fonts are large and small, upper and lower case.

EZ-DRAW 3.3 ($67.50)
Imagineering

This program emulates the Apple Graphics tablet. "Higher Text" is incorporated into the program.

ZOOM GRAPHICS ($56.50)
Imagineering

This is a graphics printing utility that allows the user to display pictures on the screen before printing. Also prints selected portions at any size.

SPECIAL EFFECTS ($56.50)
Imagineering

Paint with various brush sizes in 108 colours. Magnify picture to pixel level. Packs pictures to 70% of normal size. Will also reverse colours, flip pictures, mirror images and partial screen movements.

THE GRAPHICS MAGICIAN ($84.95)
Imagineering

An animation package consisting of a picture editor and shape table extender to allow programmers to design and store graphics files. Comes with a utility program to transfer binary files.

CAD (about $750)
Quest International

This computer aided design package supports the mouse and the Apple Colour Plotter. It allows designs, plans and other graphic work to be easily designed, enlarged to allow detail to be inserted. A powerful Computer Aided Design package. (An even more complex system called CAD APPLE is also available.

SCRIBE (new for '85)
Ramware

A CAD package developed in the UK which is available at two levels. The first level, PRE-SCRIBE, is a self-contained menu-driven three-dimensional graphic modelling and drawing system. It will run on a 48K Apple II with a single disk drive. Other levels of the CAD system are also available.

BIT STIK (under $800)
Robocom

Bit Stik is a hardware/software graphics system for a 64K Apple with 2 disk drives. The package includes a high-precision 3-axis joystick with 3 buttons which connects to the games I/O socket and is powered by the Apple. The software includes a complete, menu-driven picture creation utility which allows complex pictures to be drawn easily using the BIT STIK.

DIGI-SCAN ($800.00)
Tobor

Digi-scan is an optical scanning digitiser and printer for use with the Apple II and Apple IIe computers. It takes an image from hard copy such as drawings, photocopies, prints or photographs and places that image on either of the hi-res screens. The image can then be saved as a binary file. In addition to the digitising mode it can act as a conventional dot matrix printer. Digi-scan can digitise and transmit an image via a modem.

7. DATA BASES FOR THE APPLE II FAMILY

OLYMPIC DATABASE ($45)
Aardvark Software

This package includes three programs. The first of these, the Olympic database, allows the user to search for particular events or an athlete's name or simply look through the data. The second program the Aardvark World Map shows the home countries of gold medal holders, past locations of the olympics and allows the computer to test the user on countries and cities. The third of the programs, Aardvark Pictograms, allows the user to choose pictograms or play a pictogram guessing game at two levels.

ONE WORLD DATABASE ($110)
Active Learning Systems

A database of demographic, political and economic information about every country in the world. It allows the user to search and analyse the database according to criteria selected. It teaches research and data interpretation in the fields of geography, social science and current affairs. Documentation includes teachers' notes, student worksheets and step-by-step operating instructions.

HOMETOWN ($110)
Active Learning Systems

Hometown allows students to store and analyse information collected in field surveys. The database has 9 open fields which enable students to include information of special interest to them. The activities involved in the use of this package include: sampling, collecting and recording data, collating information, problem solving, graphing, interviewing, map reading, interpreting results, discussion and debating.

AUSTRALIA A PROFILE ($110)
Active Learning Systems

A package allowing students to compare different regions in Australia. The data provides a comprehensive source of statistical information designed to encourage students to analyse information and to draw conclusions. The census information includes: population, population growth, age distribution, school leaving age, ethnic origin, income, housing, employment, industrial and agricultural activity.

FACT & FICTION TOOL KIT ($59.95)
Ashtron Software

This package includes two programs "Story Maker" and "Secret Filer". The "Secret Filer" is an easy to use filing system. Files are limited to five categories and may be sorted alphabetically, using any category. Searches must be exact.

MICROZINE 1, 4 & 6 ($49.95 each)
Ashtron Software

Each of these Microzine volumes contains a simple filing program. In Microzine 1, the program is called Secret Files which can be used to organise any information. In Microzine 4, Log It keeps track keeps track of sport scores, marks etc. In Volume 6, Olympic Mail contains some olympic details and these may be added to or amended.

CLASSIFICATION GAME - ANIMALS ($25)
Gemini Software

Enquires about the characteristics of an animal chosen by the computer to determine which one it is from a list of 36 vertebrates and invertebrates.

CLASSIFICATION GAME - GENERAL ($25)
Gemini Software

Establishes a list of questions, and sets of answers, to enable students to identify mystery items, be they chemicals, countries or foods.

INFORMATION MANAGEMENT PACKAGE ($45)
Gemini Software

A simple, data management package, which will enable the teacher or student to establish their own data bases.

BUSHRANGER DATABASE (new for '85 about $95)
Knoware

The Bushrange Data Base provides not only direct data about the bushrangers, but also ballads and a dictionary capability so that students can check the meaning of unknown words in the ballad. It is well supported with worksheets and will provide a valuable resource for schools.

THE CONVICTS ABSCONDED ($3 + disk for members)
THE CONVICT PHYSICAL FEATURES ($5 + disk for non members)
N.S.W. Computer Education Group

The Convicts Absconded and The Convict Physical Features data bases were based on data from the Quarterly Return of Absconded Convicts in the Colony of NSW. The Convicts Absconded data base contains 11 fields for each record and provides general information on the convicts, including details about their tyime in Australia. Fields include: Year of Arrival in Australia, Trade, Native Place, From Whom Escaped and From Where Escaped. An additional data base, Convict Ships, accompanied the main data base.

The Convict Physical Features data base contains fifteen fields for each record and is concerned with the physical appearance of the convicts. Each of the data bases was formed using the Teacher's Database by John Messing. Each data base requires 64K. An accompanying handbook is also provided.

WHAT'S IN A NAME ($50.00, new for '85)
Prologic

This program contains information from the birth notices in "The Age" in 1920, 1940, 1960 and 1980. Data is recorded by year, sex and name, so students can retrieve general information such as the most common female name. The guide includes worksheets with a variety of exercises, as well as operating instructions.

HOUNDS AND HISTORY ($50.00, new for '85)
Prologic

The dog registration records from a municipal council in 1885 provide the data for this package. There is information about the breed, colour, sex and age of each registered dog, as well as the owner's name and place of residence. This package is suitable for local history, geography, social studies and computer awareness.

THE DREAM MACHINE ($50.00, new for '85)
Prologic

This database includes details of over fifty different makes of car and their registrations in each state over the period 1960 to 1983.

CRIME AND SOCIETY ($50.00, new for '85)
Prologic

A database to enable the student to study the changing nature of crime and comparisons of rates of crime across categories such as sex or age. The data consists of detailed information on some seventy crimes for the years 1960, 1970 and 1983 and was obtained from the Victoria Police Statistical Review of Crime. This program would be suitable for History, Social Studies, Legal Studies or Womens' Studies.

THE FIRST FLEET DATABASE ($35.00)
Tasmania Media System

Contains data about the convicts who arrived with the First Fleet in 1788. The contents of the package include the disk, 32 student worksheets, 1 hard-copy print-out of the data and 1 teacher's guide.

BIRDS OF ANTARCTIC DATABASE ($35.00)
Tasmania Media System

Produced as part of Information Technology Month in 1984. It contains data collected during a voyage in the Antarctic Ocean.

8. SIMULATIONS FOR THE APPLE II FAMILY

AUSTRALIAN TOURS ($42.95)
Ashtron Software

A simulation game in which you play the role of a tour guide at a tourist agency. Skills are developed in geography, history and economics.

JENNY OF THE PRAIRIE ($49.95)
Addison Wesley

A simulation in which Jenny gets separated from her waggon train heading west in the USA. Jenny must gather food and find shelter to survive the winter. Dangers include snakes, coyotes, etc. This program works at three levels of difficulty and although it takes a considerable time to solve even at the first level, it certainly generates interest. It is the first of a series of four programs where the main character is a female.

VOLCANOES ($49.95)
Dataflow

A game of strategy and cooperation for two to four players suitable for high school students. The program illustrates how volcanologists study potentially active volcanoes. The object of the game is to accurately predict volcanic activit;y, warn the local inhabitants and stay within a budget. The game has a "save" option to that players can continue a game at a later time.

TRAINS
Imagineering

The student is in charge of an old-time American railway empire. Running the business teaches about the interrelationship between industries. Pick up and deliver on time and the business will be a success.

GOLD DUST ISLAND ($49.00)
Jacaranda Wiley

This program provides an opportunity for students to compare cooperative and non-cooperative behaviour. It emphasises the need to share ideas and resources and is therfore suitable for social science courses.

SCAVENGER HUNT ($35.00)
Jacaranda Wiley

Up to four players set out on a scavenger hunt. Each must find five objects which the computer randomly selects. To move their stick figures students must negotiate obstacles. Students must use the eight major compass points for giving direction and then enter a distance. The package scores for the moves and the number of items collected.

SHEEP DOG TRIAL ($35)
Jacaranda Wiley

A grid game for two students. As well as using alpha-numeric grid references, the program encourages logical thinking and co-operative strategy planning.

QUICK CARTAGE COMPANY ($45)
Jacaranda Wiley

Allows up to four players to travel around a city and local area. Two maps of different scales are provided and the player has to collect construction materials and deliver them to the appropriate building sites. Basic mapping skills with different scales are reinforced by this program.

CUNNING RUNNING ($45)
Jacaranda Wiley

Cunning Running allows up to four students to practise basic mapping skills including map language, compass directions and alphanumeric grid-square references. Students must plot a fast and efficient course around the countryside.

RAFT AWAY RIVER ($49)
Jacaranda Wiley

An adventure simulation that provides students with an opportunity to develop skills in reading, comprehension, communication, co-operative behaviour and problem-solving. From two to six players work to survive by fishing, collecting food and wood for the fire.

SOUTH DAKOTA
Micro Nationwide

Based on a grain growing farm, provides an easy to use simulation for students from year 5 onwards. It highlights the problems faced by small businesses, the application of mathematics and how economic theory works. The user controls the crop to be planted, the number of helpers to be hired, the amount of seed purchased and the type of livestock to be purchased (if any). Finance can be from the sale of land, bank loans or sale of crops. The cost of land fluctuates and money is needed to clothe and feed the family. Taxes are also collected based on what is earned from the harvest.

FREE ENTERPRISE ($150.00)
Science Resource Associates

Free Enterprise is a business simulation in which the participants run companies making the same type of product. Up to six individuals or teams can participate, or one or more can interact with computer players simulating competition among up to six companies. Each company may sell its product in its own geographic home ares, in the home areas of its competitors, and in a common market area equally accessible to all. The measure of success can be stock price, overall profit or some other agreed-upon criterion. There are three levels of difficulty and results can be saved and recalled on another occasion.

ISLE OF WHAT ($50)
Soil Conservation Authority

A simulation/role play program that illustrates the purposes and procedures of land capability assessment, land management and land use decision making. These are appropriate for geography and environmental studies from year 9 to 12.

9. ADVENTURE AND LOGICAL GAMES AND PUZZLES FOR THE APPLE II FAMILY

SPOTLIGHT ($30.00)
Apple Computer

This diskette contains four programs. Reflect and Spotlight use a joystick to rotate a mirror to reflect a light beam at a given object. Hot Stuff is a logical game like Mastermind. The aim is to identify a 3-digit number given clues about whether the number is included, correctly placed or incorrect. Boxed In is a computer version of Othello in several levels.

GERTRUDE'S PUZZLES ($54.95)
Ashtron Software

Contains six puzzles to develop reasoning skills suitable for 6 to 10 year olds. The puzzles use size, shape and colour to form patterns. Sometimes the rules are given and sometimes hidden.

GERTRUDE'S SECRETS ($54.95)
Ashtron Software

This program includes a series of games to help children from 4 to 7 to learn logical thinking. Children discover the importance of patterns and planning ahead. Different shapes and colours are used in the puzzles.

MOPTOWN PARADE ($54.95)
Ashtron Software

Moptown parade is a series of activities based on characters with four possible attributes suitable for 6 to 10 year olds. The attributes are short/tall, red/blue, fat/thin and bibbet/gribbet. Bibbets have big noses and gribbets have tails. Games are based on finding common or different attributes, changing attributes and develop reasoning skills.

MOPTOWN HOTEL ($54.95)
Ashtron Software

Moptown Hotel contains seven more activities based on the four attributes of size, shape, colour and nose or tail suitable for 8 to 13 year olds. Some of the more advanced activities work with common attributes across rows or columns of a grid. A colour screen is essential for some of these activities.

ROCKY'S BOOTS ($69.95)
Ashtron Software

Rocky's Boots helps children from 9 years onwards build a groundwork in logical skills. The player who is represented as an energy source builds logical machines with bells, clackers, switches and gates. A program that would also be suitable for reluctant readers who are fascinated with circuitry.

SNOOPER TROOPS #1 ($64.95)
Ashtron & Imagineering

The aim of this program is to find out who is trying to scare the Kim family from their new home and why! To solve this puzzle will require taking notes, drawing maps, organising information and learning new words.

SNOOPER TROOPS #2 ($64.95)
Ashtron & Imagineering

The aim of this program is to find who stole the dolphin from the aquarium. The user goes on a fact finding mission. Organising information and using reasoning skills help find a solution.

ZORK 1 ($59.95)
Ashtron Software

One of three challenging adventure games for the over 12 year old. The dungeon contains unfriendly beings and also treasure. Your mission is to find 20 treasures.

ZORK 2 & 3 ($59.95 each)
Ashtron Software

These are extensions of Zork 1 with the introduction of various other characters.

FREDDIE'S PUZZLES ($49.95)
Dataflow

This package incldes four word puzzles and six number puzzles suitable for children from 7 onwards. Students can also produce their own puzzles.

MEMORY (Pack A $180, Pack B $255, Pack C $300)
Edsoft

These three packages include a teacher framework for teaching problem solving, problem solving activites for the classroom and computer activities to reinforce learning. Pack A (ages 5 to 7) contains activities 1 to 4, Pack B (ages 5 to 9) programs 1 to 7 and Pack C (ages 5 to 11) all 10 activities. Each activity is on a separate diskette and includes a teachers guide.

THE FACTORY ($59.95)
Edsoft

This program uses graphics and animation to simulate a machine assembly line. Students are challenged to create "geometric products" on the assembly line. Skills include visual discrimination, spatial perception, analyzing a process, determining sequences.

THE POND ($59.95)
Edsoft

These three programs are suitable for 7 year olds and onwards. A small greem frog is lost in lily pads and the student is asked to recognise patterns and think logically. The three programs increase in complexity.

HOW ABOUT A NICE GAME OF CHESS ($99.95)
Imagineering

Chess, an old favourite, with optional use of the mouse.

IN SEARCH OF THE MOST AMAZING THING
Imagineering

Your uncle, Smoke Bailey will help you on your search together with a B-liner, a cross between a hot-air balloon and a dune buggy. First you need to learn to fly the B-liner and navigate through storms and fog. The program encourages problem-solving through trial and error, sharpens your ability to estimate, predict, manipulate numerical quantities and enhances awareness of distances, directions and time.

DRAGON'S KEEP
Imagineering

An adventure game written at an easy reading level. Basic skill focus includes reading comprehension, map reading, identifying details, making inferences and drawing conclusions. The object of the adventure is to free 16 animals held captive by a magical dragon. The package includes a disk, poster-sized map, 16 animal stickers, a compass decal and a Parent Guide.

TROLL'S TALE
Imagineering

An adventure game, written at an easy reading level. Vocabulary is controlled so that any young adventurer who can read at the third grade level can play the game without help. Basic skills include reading comprehension, map reading and lessons in logic. The object is to find and return the missing treasure. The package includes disk, map, 16 stickers, compass decal and a parent guide.

GELFLING ADVENTURE
Imagineering

A junior adventure game based on The Dark Crystal designed to meet basic skills for reading comprehension. Vocabulary is at the third grade level and the skills emphasised are amking inferences, predicting outcomes, drawing conclusions, following map directions, identifying and remembering details and extending vocabulary.

COMP-U-SOLVE ($59.00 each)
Micro Nationwide

Two diskettes of programs which are simulations of classical puzzles. Each of the games may be played at two levels and they support logical thought and problem solving skills. Disk 1 contains Electro-Connection, Number Hop, Tricky Trip, William's Warehouse Worries and Demon's Octagon. Disk 2 contains harder programs including Align a Laser, Weighty Decision, Dishwasher's Dilemma, Professor Engel's Waterworks and Moon Movers.

10. CREATIVE WRITING TOOLS FOR THE APPLE II FAMILY

BANK STREET WRITER
Ashtron Software ($125.00) & Imagineering ($99.95)

The first of the word processing packages developed especially for student use. On the back of the diskette is an interactive introduction which is written for those with no knowledge of word processing. The scholastic version contains extensive teacher notes to give ideas on usage within the classroom. A new version of Bank Street Writer was released late in 1984 which allows alterations to be made to the text without changing modes. It also supports the 80 column card and the 128K version supports the AppleMouse.

FACT & FICTION TOOLKIT ($59.95)
Ashtron Software

This package includes two programs - Story Maker and Secret Filer. Story Maker allows stories to be created and illustrated. Graphics may drawn using the mouse or joystick or pictures selected from the "Story Maker" gallery. Pictures and stories may be easily combined and the completed story saved to disk or printed. Story Maker requires 128K of memory. (The Secret Filer is an easy to use filing system. Files are limited to five categories. Files may be sorted alphabetically using any category. Searches must be exact.)

MICROZINE #5 ($49.95)
Ashtron Software

One of the four programs on this diskette is a word/picture processor which is like a subset of the Fact & Fiction Toolkit - however it operates in 64K. Children may illustrate their own stories. A utility to support commonly used printers will be made available through Ashtron. Three other programs are included in this microzine disk.

STORY TREE ($49.95)
Ashtron Software

This package allows students to create and read stories including choices about which way the story will unfold. Stories branch out from one beginning many different endings. With the built-in word processor children can easily write and edit adventures, mysteries or other stories. A printer will allow the stories to be printed out.

MILLIKEN WORD PROCESSOR ($95)
Brittanica Education Services

A new children's word processor which uses graphics to help children easily identify basic functions and commands. Commands are chosen by pressing the first letter of the command. Editing may be completed during the writing process. The document may be printed to screen to check the format.

ADVENTURE-DISK ($30)
Chopping, Mr. E.G.

This disk allows the student to create and play adventure games (no graphics). It provides, a sample adventure game ready to play, an editor to enter and/or edit your own situations and instructions on how to use the package.

CREATIVE WRITING - WRITING A NARRATIVE ($54.95)
Control Data

The first of a series of MECC disks on creative writing and consists of three parts. In Idea Storming One-Two-Three students learn a story-starting technique. The Moments focuses on the key elements of narrative structure by tracing the development of an event from the student's own experience. Point of View encourages students to make a conscious choice about the voice of the narrator.

TEACHER'S NOTEBOOK ($39.00)
Eureka Software

A program to allow teachers to design comprehension and cloze activities. Lettering is provided in two sizes, 20 characters per line and 40 characters per line. A word, sentence or a jpage can be displayed at any one time in upper and lower case (even on an Apple II+)

THE WRITER'S ASSISTANT (about $110)
HBS International

A powerful word processing system that is easy to learn so that students and adults can easily master it. As writers gain more experience, they activate more sophisticated features.

THE COMPUTER CHRONICLE NEWSWIRE (about $85)
HBS International

An interactive writing system which helps school children learn to write by becoming reporters for a news network that extends across the nation. Students can choose English or Spanish. This program requires the Writer's Assistant.

INTERACTIVE TOOLS
HBS International

This program allows students to create their own stories by selecting options, sequencing events and/or writing their own text. The stories can be stored, printed and edited using the Writer's Assistant.

THE EXPOSITORY WRITING TOOLS ($50.00)
HBS International

Helps writers learn how to create expository texts. Students contribute to the development of expositions and then take over more of the task of writing.

THE NARRATIVE WRITING TOOLS ($50.00)
HBS International

This program helps writers learn to create narratives. There are four sections on the disk and each varies in the level of support given to the writers.

THE POETRY PROMPTER ($50.00)
HBS International

This program helps to write various forms of poetry including structured poetry forms, more free form as well as more playful poetry.

THE CLASSROOM COMPUTER CHRONICLES ($60.00)
HBS International

A program to assist students to write different kinds of articles for a classroom newspaper.

ADVENTURES OF HORUS 1, 2 & 3 ($50.00 each)
HBS International

These are three different sets of stories with pictures that feature a large animal called Horus who has been adopted by a young girl, Shawna. The writers create their own accounts of his travels and mishaps.

PRINT SHOP ($69.95)
Imagineering

This package allows students to write, design and print cards, signs, stationary and banners. It supports the keyboard, joystick and Koala Pad and works on an Apple II+, IIe or IIc. Their are eight type styles in a variety of sizes and formats.

KIDWRITER
Imagineering

Allows children to create their own storybook including colourful scenes, write stories and even music to go with them. Children can choose their own story and picture settings from a farm to a theatre to outer space with a choice of 99 differnet characters and objects to add to the scene. Stories may continue from one page to another.

STORY MAKER
Imagineering

A creative story construction kit (see Fact and Fiction Toolkit)

STORY MACHINE
Imagineering

An educational game that helps children learn to write sentences, paragraphs and simple stories using a limited vocabulary. The child can then see the story come to life. For the 5 to 8 year old.

* TAKE A HOLIDAY ($50)
Prologic

Take a holiday focuses on developing writing and reading abilities. The children follow an Australian outback holiday story on the computer screen, making decisions about what should happen next. During the story the children are asked to name characters and must insert substantial amounts of their own text, then they write their own ending. Each child's story may be printed.

* FANTASY ISLE ($50.00)
Prologic

Children follow a fantas;y story on the computer screen, making decisions about what should happen next. During the story the children are asked to name characters and insert some short passages, then they write their own ending. Each child's story may be printed.

11. READING PROGRAMS FOR THE APPLE II FAMILY

Many of the programs listed in the Creative Writing may be used by teachers to stimulate reading either by writing stories themselves or allowing groups of children to write stories to be read and discussed by other groups in the class. The programs listed in this section are those which could be used to stimulate reluctant readers. Check also chapters 8, 9 and 10 for other suitable programs.

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MICROZINE #1 ($49.95)
Ashtron Software

One of the four programs on this diskette is a Twist-a-Plot story which is an adventure about a haunted house with delightful illustrations and several different endings. There is also the chance to interview Robert McNaughton who played Elliott's older brother in the film E.T. in the program "Ask Me".

MICROZINE #2 ($49.95)
Ashtron Software

Two of the four programs on this diskette could be used for reluctant readers. The first, Northwood Adventure is another illustrated Twist-a-Plot story. The second is called Ride the Wind, and teaches the student how to pilot a hot-air ballon and then lets them compete in a race.

MICROZINE #3 ($49.95)
Ashtron Software

The story in this issue is called "Mystery at Pinecrest Manor". The story revolves about a stolen gold statue and the operator solves the crime. One of four programs on the diskette.

MICROZINE #4 ($49.95)
Ashtron Software

The Twist-a-Plot story on this diskette is called "Adventures in the Microzone" in which you become smaller than a microchip.

MICROZINE #6 ($49.95)
Ashtron Software

Fossils Alive, is one of four programs included in this package is an interactive Twistaplot in which children search for fossils with a classmate, Dyna Saurus, and find out just how different their community looked in prehistoric times. Other programs on this diskette include Olympic News, Free Store and Sound Off!

READER RABBIT ($54.95)
Ashtron Software

A program to develop reading and vocabulary skills for the 5 to 7 year old.

* DECIDE YOUR DESTINY (new for '85 about $38 each)
Care

Three programs are currently being rewritten for the Apple and are expected to be completed during first term of 1985. Each is designed to provide an integrated reading package for year 4 to 6 children. Each story has an accompanying set of pictures which can be used in a variety of way and the documentation provides many ideas for their use. The titles of the first three of these programs are "The Mysterious Tunnel", "Yellow Beard" and "Strange House, Little Mouse".

* ZAP ($20)
Chopping Software

This program allows text to be analysed for readibility. The computer will count the words, syllables, sentences, polysyllabic words, average sentence length, average number of syllables per 100 words, average number of sentences per 100 words and give FRY's readability test, FOG index and SMOG grading. It allows Cloze examples to be produced automatically or with the teacher selecting the words to omitted.

* DIRECT HELPER (approx. $350)
Dataflow

The Direct Helper scheme is a way of helping students of all ages with reading difficulties to learn to read. The program aims to establish word-decoding, story reading and spelling skills. There is also special emphasis on the left to right sequencing of letters and words. Any number or new word lists and stories can be entered into the computer by the parent or teacher. Once the material has been prepared for use, the student can operate the computer largely on his own.

* MUMBO JUMBO ($50 including three other programs)
Diocesan Special Educ Centre

A reading game requiring the skill of sequencing. The teacher inserts the reading content. The sequencing may be based on words, paragraphs or a series of sentences or even a set of letters to be sequenced alphabetically or a list of words into alphabetical order.

* REMEDIAL READING PROGRAM (Pub domain, send disk & $5 to cover costs)
Gainford, Mr M.

Allows any text file up to 200 words produced by a word processor to be displayed at varying speeds. Simple students records are stored and may be viewed by the teacher in table or graphical form.

PLANETARY ADVENTURES ($50.00)
HBS International

This program combines reading and writing in an ineractive adventure through space. The writers blast off in a rocket through space and are given the options of a number of different space adventures on the way to the planer Zeron.

CHEMISTRY ADVENTURE ($50.00)
HBS International

The periodic table of elements becomes a neighbourhood and the elements are all people with appropriate personalities. The players are detectives who must collect clues to solve the mystery of the the silver disappearance.

NAVIGATION ADVENTURE
HBS International

This program includes two adventures in which writers must make choices as they try to navigate their way through two very different imaginary worlds, "Mean Streets" in New York City and the "High Seas" of the South Pacific.

OUR WIERD AND WACKY WORLD ($54.95 each)
Micro Nationwide

Two sets of eight short stories suitable for years 3 to 4 followed by word meaning and cloze practice. The print exercises provide comprehension and decoding skill exercises.

OUR WILD AND CRAZY WORLD ($54.95 each)
Micro Nationwide

Two sets of eight short stories followed by word meaning and cloze practice. Print material provides follow-up practice for each story. The reading level of these stories is years 4 to 5 but the interest level is that of junior secondary making them suitable for remedial work.

HOW TO READ IN THE CONTENT AREAS ($59.00 each, $229.00 for four)
Micro Nationwide

There are four different packages for each of the content areas: Science, Social Studies, Literature and Mathematics. The concepts taught include spotlighting, surveying, detecting, recalling and utilizing. These programs are suitable for late primary or remedial work in the secondary school.

SCIENCE CONTENT AREA READING ($239 for 5 diskettes)
Micro Nationwide

These cloze lessons guide students to mastery in reading science material. Each diskette contains four passages of about 300 words each. Each of the passages contains 7 deletions. These cloze examples test five components of comprehension: context clues, syntactic clues, signal words, pronoun referents and prediction clues. When a student makes an error they are given a clue, and when two or three errors are made the correct answer is displayed and explained.

12. TEACHING BASIC PROGRAMMING ON THE APPLE II FAMILY

DISCOVER BASIC ($89.95)
Ashtron Software

Provides an introduction to Applesoft BASIC using 34 demonstration programs to promote student experimentation. The package incldes a Teachers Guide, Student Workbooks, Demonstration Disk and Solutions Disk.

HOW TO PROGRAM IN BASIC TUTORIALS ($82.50)
Ashtron Software

This package contains a workbook and diskette containing a series of 14 tutorial exercises designed for students with no previous knowledge.

GETTING DOWN TO BASIC (Public Domain)
Apple

A simple introduction to BASIC program provided with the Apple IIc as an introduction. This program also works on the Apple IIe and may be obtained from Apple Dealers.

* PROGRAM DEVELOPMENT SYSTEM ($25.00)
Bartlett, Mr. W.D.

A program designed to enable the producation of efficient, well structured Applesoft programs using a USCD-like editor for producing source files that are well documented and well laid out.

* APPLESOFT PROGRAMMING UTILITIES ($18.00)
Bartlett, Mr. W.D.

This disk contains a number of relocatable binary routines including two routines for obtaining text on the hi-res graphics page and a note generating routine. Also included is a utility to provide a screen editing facility.

KIDS STUFF I & II ($45.95)
Edusoft

Interactive programs that teach the child to become the master of the computer by introducing the fundementals of BASIC programming in a manner that requires no computer background. Suitable for ages 9 and up.

AN INTRODUCTION TO APPLESOFT COMPUTING ($80.00)
Edusoft

A software package for beginners in The Apple Core series. Teaches about the computer and how to create your own programs. Disk 1 contains 14 teaching modules giving explanations and examples of programming statements. Disk 2 contains 11 learning tutorials complementing the modules on disk 1.

LEARN MORE APPLESOFT COMPUTER PROGRAMMING ($95.00)
Edusoft

This is the second part of the Apple Core series and teaches advanced methods of using and programming the Apple. Areas covered include low-resolution graphics, high-resolution graphics, the tab commands, complex editing, incorporating paddles and sound, use of random numbers, work with data lists, assigning variables, storing data on disks and using the maths functions (sine, cosine, tangent, etc.). Disk 1 contains 13 teaching modules and Disk 2 a tutorial disk with over 70 programs.

STRUCTURED BASIC ($135)
Godfrey Deane

A structured BASIC program for the Apple II+, IIe and IIc, developed in the UK, which supports all Pascal features and is interpretative. The package includes a diskette and manual. The program supports both the Applesoft graphics commands and some enhance commands. Teacher support materials will be available soon.

THE NEW STEP-BY-STEP ($149)
Imagineering

Software and audio tape to teach BASIC programming. Graphics, animation and sound effects suplement the disk and a workbook is provided for review.

MICROS MADE EASY
S.R.A.

An introduction to microcomputers for the absolute beginner. The program is in five sections: keyboarding, computer capabilities, the parts of a computer, simple programming and the elements of programming. The package inclues three disks and a user's manual

DISCOVERING BASIC
S.R.A.

This programs aims to teach fundamental programming concepts and show how to write simple programs in BASIC. Using the diskette privided students work at the microcomputer to perform exercises that relate to the concepts presented in the Student Workbook. The package includes the diskette, 20 student workbooks and a teacher's edition of the student workbook.

13. SOFTWARE FOR INFANTS SCHOOL CHILDREN FOR THE APPLE II FAMILY

The programs listed have been chosen because they cover the following areas:

- Shape recognition
- Letter or number recognition
- Counting
- Simple Addition/Subtraction
- First letter sounds
- Simple words/sentences

Programs which rely heavily on a speed component which can not be slowed or those programs where the rules of the game can not be readily understood by this age group have been omitted. It is expected that a teacher or helper will guide the small child in at least the first use of the program.

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* PICK THE SHAPE ($25)
Angle Park Computing Centre

A program involving shape recognition. The student matches a given shape with one of four shapes presented. A correct response raises a helicopter, an incorrect one lowers it. After five questions correctly answered a person parachutes from the helicopter.

APPLE LOGO ($115)
Apple Computer

Logo is a computer language developed especially for young children. With the use of simplified programs even five year olds can program the turtle, a small cybernetic animal on the screen. Logo program utilities which are freely available allow children to use logo to write in large lower case letters on the screen and then print out their work using a printer.

APPLEMOUSE & MOUSEPAINT ($184 for //e, $122 for //c)
Apple Computer

The combination of the AppleMouse and Mousepaint provides a simple introduction to the computer for children of all ages. The software allows children to readily draw on the screen and to include text in the display. The pictures formed may be printed on a dot matrix printer. Software for young children using the mouse is currently under development.

MIX AND MATCH ($30.00)
Apple Computer

One of the diskettes developed by the Children's Television Workshop containing four programs. The first Mix and Match allows childen to pick a head, body and legs of the Sesame Street characters by choosing the appropriate number and then mixing them to produce a funny figure which is then names. Raise the Flags is a guess the word game where correct letters chosen are rewarded with a nod of the head and a flag raised in the appropriate position. Teachers may insert their own lists with this program.

POWER PAD AND SOFTWARE ($199)
Ashtron Software

A touch pad for the Apple, about 30cm square, provides a valuable resource for software developed for young children. Software written to use the touch pad is also available for graphics, music and other educational applications.

JUGGLES' RAINBOW
Ashtron Software ($39.95)

A series of games for 3 to 6 year olds. The first game is to discriminate between above and below and then between left and right. Children also work with lines and circles to help them learn the letters p,d,b and q.

BUMBLE GAMES
Ashtron Software ($54.95)

A set of six games for 4 to 10 year olds introducing the concept of number pairs for points on a grid.

GERTRUDE'S SECRETS
Ashtron Software ($54.95)

A series of games (4 to 9) that help children to think logically while they play with colours and shapes. Players solve puzzles by arranging game pieces according to given rules or by guessing a secret rule.

GERTRUDE'S PUZZLES ($54.95)
Ashtron Software

Six different puzzle rooms for children of six and up. The games are aimed to develop reasoning skills. Puzzles are based on colour and shape patterns.

SPELLDIVER ($49.95)
Ashtron Software

Spelldiver is a fun way to teach spelling. Stored in memory are thousands of words, from simple five-letter teasers to ten-letter stumpers.

READER RABBIT ($54.95)
Ashtron Software

A program for 5 to 7 year olds to develop reading and vocabulary skills.

WORD SPINNER ($49.95)
Ashtron Software

This program allows 6 to 10 year olds to build three and four letter words.

ALIEN ENCOUNTER/FACE FLASH ($49.95)
Britannica Education Services & Imagic

This package contains two programs on the diskette. The first of these, Alien Encounter, is for 4 to 6 year olds. Students match the number that appears on the screen with the number of aliens they land on earth. The second program, Face Flash, is for 4 to 8 year olds. Students must indicate how many faces have flashed. The flash time decreases with each correct response.

JAR GAME/CHAOS ($49.95)
Britannica Education Services & Imagic

The first activity, Jar Game shows two jars filled with green and gold squares. Students have to select which jar should be chosen to have the best chance of getting a gold square. The students' task in Chaos is to match the shape and/or colour of the shape shown in the centre. The central shape changes every 50 seconds with a total time of 250 seconds to make as many matches as possible.

* WHAT'S THE TIME MR. WOLF (new for '85)
Care

This is a program to teach children to tell the time. A time is displayed on the clock face and children select the correct answer from four answers displayed. There are five different levels in the program from hours, half hours to times involving minutes.

* MATH INVADERS I ($40.00)
Computer Cognition

This program has several different levels catering from the preschooler to remedial mathematics in the high school. The simplest version is counting the number of objects descending from the sky. If the answer entered is correct, the objects disappear, otherwise they continue to move down. Other levels include addition, subtraction, multiplication and division at a variety of difficulty levels.

EARLY ADDITION ($49.95)
Control Data

Designed for children ages 4 to 6, the program focuses on whold number addition concepts. Both vertical and horizontal formats are used and the problems are carefully sequenced.

ALPHABET CIRCUS ($39.95)
Dataflow

This diskette contains six programmes for 4 to 7 year olds. The first, Meet the Circus, allows children to press a letter key and a picture of a circus character, animal or article beginning with that letter appears. Lost Letter, the second program provides the picture and the child must press the beginning letter. Alphabet Parade, presents the letters in alphabetical order and when the music stops the child provides the next letter. Secret Letter is a guessing game for two players. Children take turns to guess the beginning letter of the object that the ringmaster has chosen. In the fifth programme the juggler tosses a letter in the air and the child must press that key before the letter drops. The last program allows the child to spell names and create messages in big, colourful letters.

NUMBER FARM ($39.95)
Dataflow

This diskette contains six activities for 4 to 7 year olds to practice number skills. Number Farm explores the numbers from 1 to 9. Children match numerals and number words with colourful pictures. Hen House is a guessing game for two players. In Old MacDonald the children count the number of animals displayed and press the correct key. Animal Quacker challenges children to count the number of animal sounds they have heard and press the correct key. Horseshoes allows the player to determine how many horse shoes are thrown. Crop Count is a timed activity for one or more players. Win the game by quickly counting the fruits and vegetables.

SHAPE AND COLOUR RODEO ($39.95)
Dataflow

Six programmes for 4 to 7 year olds based on shapes and colours. Shape Roundup is a find the hidden shape game. Cowhand Brand is a game of shape matching played against the clock. Colour Mix and Match 1 is a game about colours and colour mixing. Colour Mix and Match 2 is a two player game based on mixing colours. Rope trick allows children to help the cowboy by selecting shapes and shape sequences. Rodeo Flags asks children to pick the odd one out - either in shape or colour.

ALIEN ADDITION ($49.95)
Dataflow

This is an addition drill and is suitable from ages 6 and up. Students use a space theme to practice addition facts. Space ships dropping from the sky contain addition problems. If the correct answer is entered the space ship is destroyed.

MINUS MISSION ($49.95)
Dataflow

This provides practice in basic subtraction facts by letting players destroy blobs of slime with a firing robot. Each blob contains a subtraction question which is destroyed by firing the correct answer.

LETTER RECOGNITION ($29.95)
Dataflow

The child must find the letter displayed on the screen on the keyboard. Additional lessons require matching upper/lower case letters, digits and number words.

MAGIC CRAYON ($54.95)
Edusoft

Gives children the power to draw pictures and designs on the computers screen. Drawing, colour selection and other options are controlled with simple keystroke commands. Completed pictures may be stored and redrawn by the computer at the child's command.

LEARNING ABOUT NUMBERS ($57.95)
Edusoft

The diskette contains three separate programs: Let's Count, Let's Tell Time and Arithmetic Fun. Let's Count is an introduction to numbers. The time program relates analogue and digital time and is especially well graded. Arithmetic Fun is practice of Arithmetic facts with a graphics "story".

LETTERS AND FIRST WORDS ($57.95)
Edusoft

Uses graphics in three separate programs to help children learn to identify letters, recognize associated sounds, and begin to spell simple words. Uses upper and lower cases.

EARLY GAMES FOR YOUNG CHILDREN ($37.95)
Edusoft

A selection of programs for the 2 to six year old. The picture menu allows even small children to select their own game. They can match large numbers, count blocks, add/subtract stacks of blocks, match letters, learn the alphabet, type their own names, compare shapes and create pictures.

EARLY GAMES MUSIC ($37.95)
Edusoft

Provides four games to allow children to learn about music. Firstly, they can create new tunes using the computer to record it and play it back. Secondly, memorise note names and keys of the piano. Thirdly, learn to perform melodies and lastly combine graphic designs with their music.

EARLY GAMES MATCHMAKER ($37.95)
Edusoft

Matching games for 2 to 6 year olds. These discrimination games involve colours, shapes, sizes and directions. Graphics and musical sounds are used the tell children if their responses are right or wrong. Very easy operation.

SPELLICOPTER ($43.95)
Edusoft

An action word spelling game with 400 words in 40 lists. The lists cover from first grade to adult but new lists may also be simply created.

MATH MAZE ($43.95)
Edusoft

Practice of mathematical facts for 6 to 11 year olds. Teachers or parents may insert their own questions with ease.

CREATURE CREATOR ($43.95)
Edusoft

Built your own creature and make it dance. Select heads, bodies, arms and legs to create creatures - for 4 to 8 year olds.

THE GAME SHOW ($49.95)
Edusoft

This program is set-up like a TV game show. An easy to use authoring system allows you to add your own questions. Prewritten data disks are also available at $21.95. Those suiting the infants environment are Win With Words II (6 to 9) and You and Your World (6 to 9).

TIC TAC SHOW ($49.95)
Edusoft

A game is based around noughts and crosses. To choose a square requires that a question is answered correctly. The authoring system is easy to operate and allows teachers to produce their own data disks. Data disks for the infants child at $21.95 include: Fun with Facts I (4 to 7), Fun with Facts II (6 to 9) and Young Explorer (4 to 7).

MASTERMATCH ($49.95)
Edusoft

This quiz is based on a concentration game with from 6 to 30 hidden squares. The authoring system which allows teachers to produce their own data disks is easy to use and allows the entry of pictures. Additional data disks at $21.95 include Basic Skills (6 to 9) and Science and Math (6 to 9).

WIZARD OF WORDS ($49.95)
Edusoft

Includes five different learning activities based on a 20,000 word dictionary. Games include hangman, unjumble the word, finding words in a larger word, a crossword game and a mastermind style word game. Words and lessons can be added to any game.

COUNTING PLUS ($59.00)
Edusoft

A program to help pre-school to primary children develop a knowledge of numbers and how to work with them. The program contains sixteen modules including counting, addition and addition with carrying.

SUBTRACTION MINUS ($59.00)
Edusoft

Introduces subtraction and subtraction with borrowing.

COUNTING BEE ($39.95)
Imagineering

This program is for children 4 to 7 years old who are learning to count. Little counter can be easily modified to meet each student's needs and the program has a built in scoreboard to monitor a student's progress. Eight activities are included to explore counting, addition, subtraction, shape discrimination, comparing weights, water heights, moving circles and length comparison.

SPELLING BEE AND READING PRIMER ($49.95)
Imagineering

Aims to build spelling skills, identify basic word groupings and link words to pictures. It includes two programs suitable for 3 to 7 year olds. Spelling Bee offers two activities. In the first the word/picture combination is shown on the screen, after the word disappears the learner attempts to spell it. The second asks children to match a word and picture. Reading primer display three objects and a single word. The child selects which object is correct. A management program is included to select word groupings, set the number and length of trials and review a learner's performance.

SPELLING BEE GAMES ($49.95)
Imagineering

Four games for 4 to 7 year olds to reinforce spelling, reading skills, and memory skills. 22 word lists are available which are the same as in Spelling Bee and Reading Primer.

THE STORY MACHINE
Imagineering

This program provides children with a limited vocabulary from which they may construct a story. As the story is entered by the student the action is shown on the screen in colour graphics. Stories may be replayed or save on diskette for later use.

KIDWRITER
Imagineering

Allows children to create their own storybook. Children start by choosing a colourful scene and then add characters and objects to complete the picture. Then children add their story which may continue from one page to another.

SCAVENGER HUNT ($35.00)
Jacaranda Wiley

Up to four players set out on a scavenger hunt. Each must find five objects. To move their stick figures students must negotiate obstacles. Students must use the eight major compass points for giving direction and then enter a distance.

EARLY CHILDHOOD LEARNING PROGRAM ($34.95 each, $149 for set of 5)
Micro Nationwide

Each of the five diskettes contains four activities. Activities include letter and numberal recognition, association of initial sound to a letter on the keyboard, making judgements, colour recognition, directionality, following directions, decision making, classification, symmetry, shape and size and spelling.

SPACESHIP LOST ($59.00)
Micro Nationwide

This program is based on the work of Piaget and focuses on directional concepts both from the childs point of view and anothers point of view. A reading age of grade one is assumed.

P.A.L. ($34.95 each, $65.00 for two)
Micro Nationwide

There are four programs on two diskettes, which are suitable for 5 to 6 year olds. They aim to develop math and reading readiness. A management system charts progress. The first disk contains copy cats (matching letters, numbers and symbols) and ABC for the Micro and Me (recognition of upper and lower case letters). The second disk contains First Numbers (matching equal amounts) and First Words (recognising word families).

EDUCATIONAL GAMES PACK #2 ($60)
Passionfruit Software

This diskette contains 5 programs and is menu driven with colour, graphics and sound. Concentration - is available in three size boards. Unscramble - tests spelling skills for one or two players (teachers may insert their own word lists. Processes Game - tests the four processes (teachers may select up to thirty different combinations). Solo Processes - as the previous program but for one player. Shape Counter - counting, addition and subtraction for the very young child

MECC - ELEMENTARY NO 7 ($27, $24 for cash)
Seasen Software

Nine different programs are included on this disk. Caterpillar -upper case alphabet drill, Train - lower case alphabet drill, A is for Apple - drill on the initial letter, Pictures - a concentration game using pictures, Words - a concentration game using words, Shapes - a concentration game using shapes, Smile - a drill counting identical objects, Wuzzle - counting identical objects in a mixed group, Spaceship - a drill on addition of identical objects.

PHONICS
Science Research Associater

A combination of computer programs and sudio cassettes giving instruction and practice. Includes, initial and final consonants, short and long vowels, initial and final consonant blends, consonant and vowel digraphs and advanced phonics.

* NUMBER DETECTIVE (new for '85)
Spinifex

A discovery learning program for 3 to 7 year olds. Children can count objects, add to the group, take away, line up the objects, scatter them and group them.

STICKYBEAR NUMBERS ($49.95)
System Peripherals

Delightful animated graphics help children recognise numbers. The package includes a full colour book, stickers and poster.

STICKYBEAR ABC ($49.95)
System Peripherals

Children press letters of the alphabet and a word starting with that letter is displayed and an animated graphics picture is shown. Upper case letters are used in this programme. The package also includes a full colour book, poster and stickers.

STICKYBEAR OPPOSITES ($49.95)
System Peripherals

Enchanting graphics are used to demonstrate opposites, for example up and down, in and out, behind and in front, etc. Lower case is used throughout the programme. Also provided is a poster, book and stickers all in full colour.

STICKYBEAR SHAPES ($49.95)
System Peripherals

A program where the child picks one of five shapes missing from the picture. When the correct shape is chosen the picture becomes animated. A book, poster and stickers are also included.

14. PRIMARY MATHEMATICS PROGRAMS FOR THE APPLE II FAMILY

Some of these programs are suitable for junior secondary students and remedial work into high school. The topics included here are work with whole numbers, fractions, decimals, integers, angles and shapes.

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COMPUTER MATHS ACTIVITIES (NOS 1 TO 5, $50.00 each)
Addison Wesley

Activities present practice of a wide variety of mathematical skills for from one to four students. The levels of difficulty of each activity can be varied.

COMPUTER MATHS GAMES (NOS 1 TO 7, $50.00 each)
Addison Wesley

Seven diskettes of games provide opportunities for problem solving, skill practice and fact reinforcement for one to four students. The level of difficulty for each game can be controlled to allow for use at a wide range of grade levels.

MATHVADER ($25.00)
Angle Park Computing Centre

A arithmetic drill program in which the student stops invaders by typing in the answer to an arithmetic question carried by the invader. The teacher can set the game in +,-,x or division and determine the difficulty of the operands and initial speed.

EDUCATION CLASSICS ($23.00)
Apple Computer

A double-sided diskette containing "Elementary My Dear Apple" on the first side and "The Shell Games" on the other. On the first side, Darts and SuperMath are suitable for primary maths. Darts helps students understand fractions and SuperMath test on basic arithmetic.

APPLE LOGO ($115)
Apple Computer

A computer language developed especially for children. Using turtle graphics allows children to experiment with numbers, angles and to estimate distances. An excellent tool for discovery learning. For resources pertaining to Logo see the section on Logo in this directory. Available in 64K and 128K versions.

NUMBER STUMPER ($54.95)
Ashtron Software

A game using animated dice to sharpen basic maths skills

ADDITION MAGICIAN ($49.95)
Ashtron Software

A discovery program about addition.

THE ELEMENTARY MATHEMATICS CLASSROOM LEARNING SYSTEM ($550.00 each)
Ashtron Software

There are two sets of programs each containing six diskettes. The first set is called Whole Numbers and covers addition, subtraction, multiplication, division, games and a learning management system. The second set, Fractions/Decimals, covers equivalence, order, addition, subtraction, multiplication, division, decimals, games and the learning management system.

THE ARITHMETIC CLASSROOM ($49.95 each)
Ashtron Software

Self-contained packages covering the areas addition, subtraction, multiplication, division, addition and subtraction of fractions, order of fractions, decimals and math games.

MATH SEQUENCES ($498 for 12, $44 each)
Britannica Education Services

The Milliken Math Sequences provide a comprehensive maths program on twelve disks covering the sections: number readiness, addition, subtraction, multiplication, division, laws of arithmetic, integers, fractions, decimals, percents, equations and measurement formulas. The material is presented in a logical order, with immediate feedback, reinforcement and help when needed. The package contains a manager program which enables teachers to maintain individual records for up to 100 students on each diskette.

GULP/ARROW GRAPHICS ($49.95)
Britannica Education Services

Gulp is a drill program on addition and multiplication. Arrow Graphics is a program where students reprogram a path shown with arrows.

FRENZY/FLIP FLOP ($49.95)
Britannica Education Services

Frenzy is a speed drill program on subtraction and division. Flip flop is for students to determine if two figures are the same, flipped or turned.

GOLF CLASSIC/COMPUBAR ($49.95)
Britannica Education Services

Golf classic allows one to four players to play golf on the screen. Estimation of distances and angles allow the players to move the ball. Compubar allows students to add and subtract bars to match the length of the given goal bar. Skills include reading bar graphs and work with arithmetic expressions.

BATTLING BUGS/CONCENTRATION ($49.95)
Britannica Education Services

Battling Bugs is a readiness game for integers. Positive and negative bugs approach each other from opposite sides of the screen. Colliding bugs disappear. Students must choose numbers to destroy all the bugs. Concentration is a memory game using equivalent fractions. Students must look for equivalent fractions which may be expressed in pictures or symbols.

* WHAT'S THE TIME MR WOLF (new for '85)
Care

A program to help children tell the time which is displayed on a clock face and the child selects the correct time from one of four options. Five levels of difficulty are in-built.

* MATHS INVADERS ($60.00 for the three)
ARITHMATTACK, FRACTION ATTACK, ALGEBRA ATTACK ($20.00)
Computer Cognition

These programs start with Arithmattack which drills arithmetic operations in an arcade style game. Fraction Attack works with fractions, decimals and roman numerals. Algebra Attack seeks solutions to equations.

ADVENTURES WITH FRACTIONS ($49.95)
Control Data

Students learn two methods of ordering fractions (common denominator and cross products) in interactive tutorials. Then they play a game to provide reinforcement in the ordering of fractions.

BASIC NUMBER FACTS ($49.95)
Control Data

This program uses an animated racetrack to practice numbers from 0 to 10.

DECIMALS ($49.95)
Control Data

Decimals is designed to help children perceive positions of decimal numbers on a number line using a dart game. The aim is to burst balloons on a number line by choosing a decimal number that will sent the dart to the balloon.

FRACTIONS ($49.95)
Control Data

Fractions is a dart game like decimals only using fractions.

GLUE BOXES: ELEMENTARY ARITHMETIC ($39.95)
Control Data

Children learn addition and subtraction through problem solving. Problems are graphically represented using boxes to add, subtract and multiply and then predict the result.

WHOLE NUMBERS ($49.95)
Control Data

This program uses a "pinball" format to drill basic number facts of addition, subtraction, multiplication, division and mixed number problems.

GROWGINS' FRACTIONS ($49.95)
Control Data

Based on the comparison of fractions with like numerators or denominators. Students explore using an animated maze game.

ALIEN ADDITION ($49.95)
Dataflow

Provide practice in addition using a space invaders type game.

MINUS MISSION ($49.95)
Dataflow

Offers practice in subtraction facts by letting students destroy green blobs using laser beams.

METEOR MULTIPLICATION ($49.95)
Dataflow

Drills multiplication facts by allowing students to disintegrate meteors moving toward the central station.

DEMOLITION DIVISION ($49.95)
Dataflow

Allows students to practice division as players fire canons to destroy tanks

ALLIGATOR MIX ($49.95)
Dataflow

Combines drills in addition and subtraction using an alligator eating questions.

DRAGON MIX ($49.95)
Dataflow

A dragon protects a city from invaders by correctly answering multiplication and division drill programs.

WIZ WORKS ($49.95)
Dataflow

Students practice basic arithmetic skills with a wizard with a magic wand. Teachers may insert their own game lists in this program.

ALIEN ACTION ($49.95)
Dataflow

Invading spaceships are repelled and the missile base saved when students give the correct answer to basic arithmetic facts. Teachers may insert their own game lists.

METEOR MISSION ($49.95)
Dataflow

Players shatter invading meteors with the right answers to math or word problems. Teachers may inset their own lists.

CLOCK ($39.95)
Dataflow

This program gives children practice in setting the hands of a clock either given the time digitally or in words. Students are also asked to type the digital time when the hands of the clock show the time. There are five levels of difficulty; hour, half-hour, quarter hour, 5 minutes and 1 minute.

USING A CALENDAR ($39.95)
Dataflow

Each lesson presents a picture of a calendar with questions about the display. All lessons are modifiable and teachers may create their own lessons.

CALENDAR SKILLS ($29.95)
Dataflow

Students learn to identify months, seasons and holidays as well as days of the week and months of the year. Suitable for 8 to 10 year olds.

MATHS CONCEPTS I & II ($39.95)
Dataflow

A two-disk program covering the number concepts of before-after, prime numbers, less-than/greater-than, place value, odd/even, decimal words, rounding, counting by 2's, 5's and 10's. Suitable for 7 to 11 year olds.

METRIC SKILLS I & II ($49.95)
Dataflow

This two-disk program introduces metric terminology and relationships. Special math symbols and shapes are available for the teacher to use to modify the lessons.

INTEGERS/EQUATIONS I & II (39.95)
Dataflow

A two-disk program introducing students to variables, integers and equations. Students simplify expressions and solve simple linear equations. Suitable for students 10 to 14 years old.

EARLY GAMES PIECE OF CAKE ($37.95)
Edusoft

Designed to teach the basic skills of arithmetic

EARLY GAME FRACTION FACTORY ($37.95)
Edusoft

Designed to teach fraction concepts. Up to three levels of hints for wrong answers. Suitable for 7 to 14 year olds.

MATH BLASTER ($59.95)
Edusoft

Contains over 600 problems covering addition, subtraction, multiplication, division, fractions and decimals. An easy to use editor allows teachers to enter problems. Questions are presented as flash cards, questions with the answer missing, questions with one of the operands missing and as an invader type arcade game.

COUNTING PLUS ($59.00)
Edusoft

A program to develop a knowledge of numbers and how to work with them. The modules include learning to count, addition and addition with carrying.

SUBTRACTION MINUS ($59.00)
Edusoft

Introduces subtraction and subtraction with borrowing.

* MATHSMASTER 1 ($39.00)
Eureka Software

The first Mathsmaster package contains five programs. Firstly, Numeral Match in which the student identifies a picture set. Secondly, Match Up in which the student selects the picture set that relates to a given numeral. Third, What Next in which the student configures number lines forwards or backwards. One Two is a tutorial, drill and recall program for addition and subtraction 1 to 10.

* MATHSMASTER 2 ($39.00)
Eureka Software

Five activities for infants/primary children. Tally Up and Take Away approach addition and subtraction of single digit numbers in a variety of ways. Zero introduces the concept of zero. Puzzles introduces problem-solving and Where Is It, is a games activity matching like shapes.

ARITHMETIC SKILLS ($59.95)
Imagineering

Covers counting, addition, subtraction, multiplication and division. The parent or teacher can define the presentation sequence, pass/fail and other parameters.

EDUWARE FRACTIONS ($59.95)
Imagineering

This program covers, definition and parts of the fraction, and each of the operations. A teacher management system is included.

EDUWARE DECIMALS ($59.95)
Imagineering

The decimals program includes conversion, rounding off, percentage and each of the decimal operations. Teacher management is included.

PRIME DUCKS
Imagineering

The emphasis of this program is understanding prime numbers, but this also teaches them the processes of factoring and multiplications. Two games are included in the package, the first, Multiplication shows how small numbers multiply to make large ones, and the second, The Factoring Game shows how large numbers factor down into prime numbers.

FRACTION FEVER
Imagineering

Fraction Fever is fast-pace game where success depends on a knowledge of fractions. It develops an understanding of what a fraction is, or relationships between different fractions and the relationship between numerical and visual representations of fractions.

WIZMATH
Imagineering

Reinforces maths skills from addition to algebra. The object of the game is to form tru mathematical equations by moving blocis with numbers and symbols into a meaningful order.

MATH SKILL GAMES ($75.00)
McGraw Hill

A maths drill at three skill levels in the four operations.

MATH WORD GAMES ($49.00)
McGraw Hill

A program to build skills in solving math word problems. The program illustrates the problem to be solved - the student determines the correct operation and solves the problem. Reading level is at or below the math content level.

MATH REGROUPING GAMES ($75.00)
McGraw Hill

Uses graphics to demonstrate regrouping and renaming skills in addition and subtraction.

SALINA MATH GAMES ($59.00 each)
Micro Nationwide

Two diskettes of maths games for two players. Most have optional tutorials to familiarise the students with the games. Disk 1 contains round table, panzer problems, bingo and dragon cave. Round table is based on rounding numbers to the nearest tenth, hundredth, thousandth, etc. Panzer problems covers single digit multiplication. Bingo is based on estimating answers to decimal multiplication problems. Dragon Cave requires students to evaluate functions for specific values.

Disk 2 contains tic tac tow, reduce, spider web and three in a row. Tic tac toe asks students to compare fractions with <, > or = signs. Reduce is based on reducing fractions. Spider Web is finding a fractional part of a number. Three in a row covers changing an improper fraction to a mixed number.

MATH CONQUEROR ($34.95)
Micro Nationwide

An arcade style arithmetic drill program covers addition, subtraction, multiplication and division.

LONG DIVISION ($29.95)
Micro Nationwide

This program teachers, practices, reviews and reinforces the learning of long division principles.

PERCENTAGES ($59.00)
Micro Nationwide

A series of three programs providing instruction and reinforcement in solving percentage problems. They include an introduction to percentages, fractions as percentages and finding a percentage of a number.

INTRODUCTION TO MATHEMATICS ON THE COMPUTER ($49.95)
Micro Nationwide

A program designed to help slow learners to increase their mathematical abilities and covers the four arithmetic operations and six levels of difficulty.

INTRODUCTION TO DECIMALS ON THE COMPUTER ($49.95)
Micro Nationwide

Designed for slow learners. It covers the four operations on decimals at six levels of difficulty.

MISSING MATH FACTS ($49.95)
Micro Nationwide

A drill program on the four arithmetic operations where part of the question is missing and the answer is given.

GRAND PRIX ($79.50 each)
Pitman

The six disks of maths programs based around a car racing game. The six programs cover, whole numbers, place value, fractions, decimals/percents, integers and estimating/rounding.

* EDUCATIONAL GAME PACK #2 ($60.00)
Passionfruit Software

A menu-driven diskette containing 5 programs. Two of the programs are based on arithmetic, processes game and solo processes. These test the four arithmetic operations. Teachers can select one of up two thirty different combinations to provide drill in specific areas.

ELEMENTARY VOLUME 1 - GAMES AND DRILL ($27, $24 for cash)
Seasen Software

There are eleven programs on this disk including games of skill, drills on basic facts and the metric system. It includes Hurkle, a grid game, Bagels and Taxman which are logical games.

ELEMENTARY VOLUME 8 - POINTS AND ANGLES ($27, $24 for cash)
Seasen Software

Includes two tutorial programs to cover points and angles and corresponding quizzes to test the concepts. Points defines points, lines and line segments and then gives a quiz on these concepts.The program Angles, defines rays, angles, degrees and right, acute, obtuse and straight angles.

ELEMENTARY VOLUME 9 - LINES AND TRIANGLES ($27, $24 for cash)
Seasen Software

The two concepts are covered with a tutorial lesson and quiz. The first, lines defines parallel, perpendicular and intersecting lines. The second, triangles defines scalene, isosceles, equilateral, acute, right, obtuse and equiangular triangles.

ELEMENTARY VOLUME 10 - QUADRILATERALS, AREA & PERIMETER ($27)
Seasen Software

The tutorial and quiz on quadrilaterals covers parallelogram, rectangle, square, trapezium, etc. The second tutorial and quiz leads students in the development of formulae for the perimeter and areas of triangles and quadrilaterals.

* ARITHMETIC-MADE EASY ($49.95 each)
Spinifex Software

Four programs covering the operations of addition, subtraction, multiplication and division which allows the teacher to set individualised problem sets quickly and easily. Students may step through problems to see the method or ask for help. One of the few programs that covers long multiplication and division as well as addition and subtraction with carrying or borrowing.

ARITHMETIC GAMES ($89.00 each, $210 for three)
S.R.A.

Three sets of two games covering arithmetic drill and problem-solving. Students may play in pairs or against the computer.

MATHEMATICS LEVELS A, B, C (managed $295, $525, $665, total $1350)
(unmanaged $510, $695, $805, total $1675)
S.R.A.

The major arithmetic skill for primary schools are covered in sequences lessons. The package is available in a managed or unmanaged version. Level A covers addition and subtraction, place value, comparing and ordering numbers and counting. Level B covers all operations on whole numbers, addition and subtraction of fractions and mixed numbers, place value, comparing and ordering. Level C reviews and extends the topics in A and B and also introduces decimal concepts and operations and multiplication and division of fractions.

SEATWORK GENERATOR ($350)
S.R.A.

Allows exercises to be printed on 316 math skills. Exercises are generated at random. Skills include operations on whole numbers, fractions and decimals, place value, ordering, comparing, rounding, exponents, ratio, proportion, percent, measurement units, formulae, expressions, equations and integers.

FACT TRACK ($140)
S.R.A.

Timed drills of arithmetic operations.

CLASSROOM MANAGEMENT SYSTEM: MATHEMATICS (level A $790, level B $895)
S.R.A.

Students take diagnostic tests to pinpoint areas of weakness. The computer then displays or prints a personalized assignment that assign materials for needed instruction and practice. Students return to the computer for retesting after completing the assigned work.

ELEMENTARY MATHEMATICS VOLUME 1 ($35.00)
Tasmania Media Centre

A package consisting of five activities developed in Tasmania. Monkey is a number practice game, School Bus works with number patterns for whole numbers, Escape is practice with order of operations. Factor Game tests factors and prime numbers. Battleships is an introduction to co-ordinate geometry.

ELEMENTARY MATHEMATICS VOLUME 2 ($35.00)
Tasmania Media Centre

Four activites introducing fractions and decimals. Kangaroos is based on adding simple fractions. Star Flight uses percentages, fractions and decimals. Hunt the Monsters uses addition, subtraction, multiplication and division of fractions. Dock the Boat requires an understanding of elementary fraction concepts.

15. SPELLING AND WORD MEANING PROGRAMS FOR THE APPLE II FAMILY

* GUESS THE WORD ($25.00)
Angle Park Computing Centre

A program based on the user selecting letters to guess the word. The teacher controls the word list, the number of wrong guesses and the time allowed to guess the word.

* TREE OF KNOWLEDGE ($25.00)
Angle Park Computing Centre

A sentence building program in which the student plays a guessing game with the computer and when the computer in unable to guess the object, teacher the computer about the new object. The game can be set by the teachers to work with particular objects when the teacher defines the first two objects.

EDUCATION CLASSICS ($35.00)
Apple Computer

On one side of this disk are four programs: Lemonade, Darts, SuperMath and Don't Fall. Don't Fall is a word recognition and spelling game like Hangman. Teachers may easily add new lists of words using the editor.

MIX & MATCH ($30.00)
Apple Computer

Raise the Flag, one of four programs on this disk is a guessing game. Teachers may insert their own word list. Animal is a logical game where the user has to define animals that the computer does not already know. The other two programs are Layer Cake, a logical game, and Mix & Match, a fun program for children to mix parts of a body to make mixed muppets.

WORD SPINNER ($49.95)
Ashtron Software

The program allows children to build three and four letter words. Players experiment with letter combinations to build words and learn to recognise common patterns of letters.

MAGIC SPELLS ($49.95)
Ashtron Software

In this program children unscramble and practise spelling words. Teachers can insert their own word lists.

TRICKSTER COYOTE ($49.95)
Ashtron Software

A hidden word game. Over 300 words in three difficulty levels are included on the disk and teachers can insert new word lists.

THE CHAMBERS OF VOCAB ($49.95)
Ashtron Software

A vocabulary game in a maze. The disk has over 300 words and more can be added by the user.

KEY LINGO ($49.95)
Ashtron Software

This is a vocabulary game with built-in dictionary. To find Key Lingo's whereabouts you must trade words to get sections of the map.

SPELLDIVER ($49.95)
Ashtron Software

A word guessing game in which thousands of words are stored on disk from simple five-letter words to ten-letter words.

CROSSWORD MAGIC ($84.95)
Ashtron Software & Ramware

The user can supply words on any subject and the program will automatically interconnect them to form a puzzle. Print out the puzzle and the clues on your printer. Assists with word recognition, vocabulary and spelling skills. A useful resource for the classroom teacher.

ELEMENTARY VOLUME 11: LANGUAGE ARTS (PHONET) ($49.95)
Control Data

This program allows a student to work through a set of predetermined phonetic exercises in sound associations, affixes, syllables, contractions and homonyms.

ELEMENTARY VOLUME 12: SIMS ($49.95)
Control Data

A package containing four different programs to practise over 500 words from the SIMS reading curriculum. The programs include a "hangman" game, a word scramble game, a spelling memory drill and a word-find puzzle generator.

* DIRECT HELPER
Dataflow

A major package for remedial reading and spelling developed in Australia. It includes four programs for student use: Word Reading (SAY), Story Reading (STORY), Spelling (SPELL) and Advanced Spelling (HIDE AND SPELL).

VERB VIPER ($49.95)
Dataflow

Assists students master subject agreement with regular and irregular verbs in present tense, past tense and past participle form.

WORD INVASION ($49.95)
Dataflow

Provides practice in identifying parts of speech in an arcade style game. Six parts of speech are included: nouns, pronouns, verbs, adverbs, adjectives and prepositions.

WORD MAN ($49.95)
Dataflow

Gives children practice in word formation with three and four letter words.

SPELLING WIZ ($49.95)
Dataflow

Practice in selecting missing letters from commonly misspelled words.

WORD RADAR ($49.95)
Dataflow

A program to provide practice in matching sight words.

WORD MASTER ($49.95)
Dataflow

Gives practice in identifying antonyms, synonyms and homonyms at three difficulty levels.

ALLIGATOR ALLEY ($49.95)
Dataflow

Selects the options where the two parts make a word. Enter your own lists to expand this progrma.

IDEA INVASION ($49.95)
Dataflow

Teachers can build their own game based on groups. Similar to Word Invasion but teachers can enter their own information.

MASTER MATCH ($49.95)
Dataflow

A game like Word Master where teachers can enter their own information in pairs for any subject area.

ANALOGIES TUTORIAL ($49.95)
Dataflow

The student learns to identify different types of analogies with hints or explanations given where an incorrect response is given. Types of analogies include: synonym/antonym, object/group, part/whole, object/use, object/user, cause/effect and object/description. Lesson content may be altered by the teacher.

ANALOGIES ADVANCED ($39.95)
Dataflow

A more advanced two-disk program for grades 7 to 10.

WHO, WHAT, WHERE, WHEN, WHY ($35.95)
Dataflow

Fourteen sequenced lessons to teach children to differentiate between these often confused concepts. A program that the teacher may modify.

WORD FAMILIES ($29.95)
Dataflow

A program suitable for grades 1 to 4 which helps children find word families. Students select other letters that will replace the underlined letter in the word to make another word. The program is modifiable.

VERB USAGE 1,2,3 ($29.95 each)
Dataflow

Provides practice on the correct use of verbs in three disk programs. Each lesson is based on discriminating between the present, past, past participle, and the infinitive of a single verb. Disk 1 includes do, see, go, eat, take, give, blow, grow, know, throw, run, come, ring, sing and begin. Disk 2 includes the verbs ride, drink, speak, break, choose, swim, freeze, drive, tear, wear, fly, write, bring, draw and shake. The third disk covers steal, fall, swing, say, be, is/are, was/were, isn't/aren't, wasn't/weren't and doesn't/don't.

MEMORY MATCH ($35.95)
Dataflow

A concentration game that the teacher may easily modify. Categories on the disk include: homonyms, number words, rhyming words, contractions and many others.

FIGURATIVE LANGUAGE ($49.95)
Dataflow

A two-disk program to help students understand figures of speech. Examples include: simile, metaphor, hyperbole and personification. All lessons may be modified and the program keeps individual and class records.

ADVERBS ($39.95)
Dataflow

The graded lessons included on this disk help students to identify adverbs by their use, position and structure. Teacher modification and class records are a feature of this program.

ADJECTIVES ($39.95)
Dataflow

Multilevel lessons include the identification of adjectives, possessive nouns and possessive pronouns, adjective endings and using articles as adjectives. Both individual and class records are stored and may be printed and the lessons are modifiable.

ANTONYMS/SYNONYMS ($39.95)
Dataflow

The program features five different levels, record keeping and the option for teachers to modify the lesson material.

CAPITALIZATION ($49.95)
Dataflow

A two-disk program covering the rules of capitalization followed by examples and 25 practice sentences. The test disk includes student management files which keep records on all student responses.

OPPOSITES ($29.95)
Dataflow

A graded set of lessons suitable for the primary student.

ROOTS/AFFIXES ($39.95)
Dataflow

Lessons on roots, prefixes and suffixes suitable for primary students.

NOUNS/PRONOUNS ($32.95)
Dataflow

The multilevel program includes recognition of common and proper nouns, possessive-nouns and pronouns, noun plurals, identification of pronouns and identification of pronoun antecedents.

HOMONYMS ($29.95)
Dataflow

Lessons include 17 tutorials and 3 reviews at five levels of reading. Starting with examples like son/sun and leading to cereal/serial.

VERBS ($32.95)
Dataflow

The skills included are identification of verbs, agreement of subject and verb, past, present and future forms of regular and irregular verbs, contractions, subjunctive forms, etc.

ELECTRIC ENGLISH ($142.95)
Edsoft

The package includes two diskettes and allows students to learn parts of speech and identification or phrases, clauses and sentences within the context of complete paragraph lessons.

CRYPTOCUBE ($43.95)
Edusoft

A family word game with 50 four-sided puzzles with vocabulary levels for ages 8 to adult. Puzzles may also be created using the editor.

SPELLICOPTER ($43.95)
Edusoft

A word spelling game with 400 words in 40 lists. Several levels of play are included and teachers may insert their own word lists.

SPELLAGRAPH ($43.95)
Edusoft

Practice spelling and work out word picture puzzles. New word lists may be created.

WORD ATTACK ($67.95)
Edusoft

The program includes 675 words with meanings and sentences illustrating their use on 9 levels of difficulty. Activities include multiple-choice quizzes, sentence completion exercises and an arcade game. Teachers may create new disks and add words for their individual needs.

SPELL IT ($67.95)
Edusoft

A spelling program that concentrates on the 2000 most commonly misspelled words. Teachers may create their own lists.

* WORD WORM ($45.00)
Logistics

The words for this spelling games are chosen from a word list which may be created by the teacher. The chosen word is scattered on the screen and the student controls a worm to eat the letters in the correct order.

* SPELLING & SPEED READING ($60.00)
Lothlorien Software

Teachers may insert their own word lists in this program.

DRAGON GAME SERIES FOR LANGUAGE ARTS ($59.00)
Micro Nationwide

A game format allowing students to review and practice parts of speech and other english language concepts including nouns, verbs, adjectives, synonyms, antonyms and contractions.

ENGLISH BASICS - PARTS OF SPEECH ($49.95 each, $195 for 5 disks)
Micro Nationwide

Each of the five programs contains tutorial and testing material and a management system. Topics for the five disks are nouns, pronouns, verbs, adjectives and adverbs.

ENGLISH BASICS - CONCEPTS IN LANGUAGE ARTS ($49.95 each, $119 for 3)
Micro Nationwide

Tutorial and testing material on homonyms, synonyms and contractions.

SPELLTRONICS ($69.00)
Micro Nationwide

The program uses the letter cloze technique to reinforce correct spelling and build visual memory. The program on two disks includes 240 new words and teachers may add their own lists. Each word is presented 3 times with different letters missing. Suitable for students with trouble spelling

SCRAMBLED LETTERS/FLASH SPELLING ($39.95)
Micro Nationwide

Scrambled letters is a game for two in which spelling words are presented scrambled and the students unscramble the word. Teachers may add their own words. Flash spelling flashes the word and then the student types the word on the keyboard. If the student is incorrect, the word is flashed again for a longer time. Teachers may add their own lists.

* EDUCATIONAL GAMES PACK #2 ($60.00)
Passionfruit Software

Of the five programs included on this disk, Unscramble is suitable for spelling. The game is for one or two players with 5 levels of spelling words included on the disk or teachers may add their own words. The other programs are concentration, two arithmetic activities and a shape counter for the infants child.

ELEMENTARY VOLUME 2: LOGIC, SPELLING AND VOCABULARY ($27, $24 cash)
Seasen Software

This diskette contains 7 programs. The first, Word Find, allows the teacher to enter words which are then printed out in a word puzzle. Crossword accepts both words and clues to generate crossword puzzles. Amazing generates mazes for students. Mixup presents scrambled words from a list entered by the teacher. Spell gives a timed display of words from a teacher entered list and then the student enters the word. In Word Game students are given clues to try to type the word selected by the computer. Talk allows young children to have a "conversation" with the computer.

ELEMENTARY VOLUME 5: PREFIXES ($27, $24 cash)
Seasen Software

Contains lessons and drill on the five prefixes, un-, re-, dis-, pre- and in-. Activities and work sheets complement the lessons.

16. SOCIAL STUDIES PROGRAMS FOR THE APPLE II FAMILY

* OLYMPIC DATABASE ($45)
Aardvark Software

The package includes three programs. The first of these, the Olympic database allows the user to search for particular events or an athlete's name or simply look through the data. The second program the Aardvark World Map shows the home countries of gold medal holders, past locations of the olympics and allows the computer to test the user on countries and cities. The third of the programs, Aardvark Pictograms, allows the user to choose pictograms or play a pictogram guessing game at two levels.

* ONE WORLD DATABASE ($110)
Active Learning Systems

A database of demographic, political and economic information about many countries in the world. It allows the user to search and analyse the database according to criteria selected. It teaches research and data interpretation in the fields of geography, social science and current affairs. Documentation includes teachers' notes, student worksheets and step-by-step operating instructions.

* HOMETOWN ($110)
Active Learning Systems

This package allows students to store and analyse information collected in field surveys. The database has 9 open fields which enable students to include information of special interest to them. The activities involved in the use of this package include: sampling, collecting and recording data, collating information, problem solving, graphing, interviewing, map reading, interpreting results, discussion and debating.

* AUSTRALIA A PROFILE ($110)
Active Learning Systems

A package to allow students to compare different regions in Australia. The data provides a comprehensive source of statistical information designed to encourage students to analyse information and to draw conclusions. The census information includes: population, population growth, age distribution, school leaving age, ethnic origin, income, housing, employment, industrial and agricultural activity.

JENNY OF THE PRAIRIE ($49.95)
Addison Wesley

A simulation in which Jenny gets separated from her waggon train heading west in the USA. Jenny must gather food and find shelter to survive the winter. Dangers include snakes, coyotes, etc. The program works at three levels of difficulty and although it takes a considerable time to solve even at the first level it certainly generates interest. It is the first of a series of four programs where the main character is a female.

AUSTRALIAN TOURS ($42.95)
Ashtron Software

A simulation game in which you play the role of a tour guide at Australia Tours, a tourist agency. Skills are developed in geography, history and economics.

MICROZINE 1, 4 & 6 ($49.95 each)
Ashtron Software

Each of these Microzine volumes contains a simple filing program. In Microzine 1, the program is called Secret Files which can be used to organise information. In Microzine 4, Log It keeps track keeps track of sport scores, marks etc. In Volume 6, Olympic Mail contains some olympic details and these may be added to or amended.

* AUSTRALIAN MAMMALS ($49.95)
Dataflow

The student "buys" clues at varying levels of difficulty to try to identify the mammal. Higher scores are gained by using more difficult clues. Teachers may change the clues and point values.

* CAPTAIN COOK ($49.95)
Dataflow

Students try to identify a place or event using clues. Scores are allocated, higher scores for use of fewer more difficult clues. Teachers may change clues and point values.

* COMPUTER FUN ($50)
Diocesan Special Education Centre

Australia quiz is one of four programs on this diskette. The quiz asks for the state of origin of the towns selected by the computer. The name of the champion is maintained. The other three programs consist of a number drill, number guessing game and a reading game requiring the skill of sequencing.

* CLASSIFICATION GAME - ANIMALS ($25)
Gemini Software

Enquire about the characteristics of an animal chosen by the computer to determine which one it is from a list of 36 vertebrates and invertebrates.

* CLASSIFICATION GAME - GENERAL ($25)
Gemini Software

Establish a list of questions, and sets of answers, to enable students to identify mystery items, be they chemicals, countries or foods.

* GOLD DUST ISLAND ($49.00)
Jacaranda Wiley

This program provides an opportunity for students to compare cooperative and non-cooperative behaviour. It emphasises the need to share ideas and resources and is therfore suitable for social science courses.

* SCAVENGER HUNT ($35.00)
Jacaranda Wiley

Up to four players set out on a scavenger hunt. Each must find five objects which the computer randomly selects. To move their stick figures students must negotiate obstacles. Students must use the eight major compass points for giving direction and then enter a distance. The package scores for the moves and the number of items collected.

* SHEEP DOG TRIAL ($35.00)
Jacaranda Wiley

A grid game for two students. As well as using alpha-numeric grid references, this program encourages logical thinking and co-operative strategy planning. Suitable for ages 7 to 13

* QUICK CARTAGE COMPANY ($45)
Jacaranda Wiley

The program allows up to four players to travel around a city and local area. Two maps of different scales are provided and the player has to collect construction materials and deliver them to the appropriate building sites. Basic mapping skills with different scales are reinforced by this program.

* CUNNING RUNNING ($45)
Jacaranda Wiley

Cunning Running allows up to four students to practise basic mapping skills including map language, compass directions and alphanumeric grid-square references. Students must plot a fast and efficient course around the countryside.

* RAFT AWAY RIVER ($49)
Jacaranda Wiley

An adventure simulation that provides students with an opportunity to develop skills in reading comprehension, communication, co-operative behaviour and problem-solving. From two to six players work to survive by fishing, collecting food and wood for the fire.

* BUSHRANGER DATABASE (new for '85 about $95)
Knoware

The Bushranger Data Base provides not only direct data about the bushrangers, but also ballads and a dictionary capability so that students can check the meaning of unknown words in the ballad. It is well supported with worksheets and will provide a valuable resource for schools.

* AUSTRALIAN GEOGRAPHY TUTOR ($75.00)
Lothlorien Software

A map orientated program to test students knowledge of locations of towns and other points of interest in Australia. Teachers can insert their own data and positioning on the map.

SOUTH DAKOTA
Micro Nationwide

This simulation, based on a grain growing farm, provides an easy to use simulation for students from year 5 onwards. It highlights the problems faced by small businesses, the application of mathematics and how economic theory works. The user controls the crop to be planted, the number of helpers to be hired, the amount of seed purchased and the type of livestock to be purchased (if any). Finance can be from the sale of land, bank loans or sale of crops. The cost of land fluctuates and money is needed to clothe and feed the family. Taxes are also collected based on what is earned from the harvest.

* THE CONVICTS ABSCONDED ($3 + disk for members)
* THE CONVICT PHYSICAL FEATURES ($5 + disk for non members)
N.S.W. Computer Education Group

The Convicts Absconded and The Convict Physical Features data bases were derived from data from the Quarterly Return of Absconded Convicts in the Colony of NSW. The Convicts Absconded data base contains 11 fields for each record and provides general information on the convicts, including details about their time in Australia. Fields include: Year of Arrival in Australia, Trade, Native Place, From Whom Escaped and From Where Escaped. An additional data base, Convict Ships, accompanies the main data base.

The Convict Physical Features data base contains fifteen fields for each record and is concerned with the physical appearance of the convicts. Each of the data bases was formed using the Teacher's Database by John Messing and each requires 64K. An accompanying handbook is also provided.

* WHAT'S IN A NAME ($50, new for '85)
Prologic

This program contains information from the birth notices in "The Age" in 1920, 1940, 1960 and 1980. Data is recorded by year, sex and name, so students can retrieve general information such as the most common female name. The guide includes worksheets with a variety of exercises, as well as operating instructions.

* HOUNDS AND HISTORY ($50, new for '85)
Prologic

The dog registration records from a municipal council in 1885 provide the data for this package. There is information about the breed, colour, sex and age of each registered dog, as well as the owner's name and place of residence. This package is suitable for local history, geography, social studies and computer awareness.

* THE DREAM MACHINE ($50, new for '85)
Prologic

This database includes details of over fifty different makes of car and their registrations in each state over the period 1960 to 1983.

* WOODLAND FOODWEBS ($50.00, new for '85)
Prologic

This program allows the student to construct a foodweb using Australian animals, and to investigate their interaction over a fifteen-year period. The student can also simulate the introduction of foreign species as well as noting the effects of drought on the ecosystem. The changing nature of ecosystems and the impact of exotic animals are highlighted. The accompanying guide book includes worksheets which provide a variety of exercises.

* WHERE ARE WE? ($50.00, new for '85)
Prologic

Children move to eight locations on the screen, using the compass points and recieve random information about what exists at these locations. From the clues they can: determine the type of area shown, name each location and draw a map of the area. The program also contains a blank framework so that children can plan their own map and write in clues for others to use. The teacher's manual provides various strategies and teaching activities.

* DESIGNING AN ENERGY-EFFICIENT HOME ($50.00, new for '85)
Prologic

The program allows students to design and construct a theoretical house. Students draw up their design on the computer and make decisions about the location, orientation, building materials, roofing, flooring, insulation and window shading. The students design and construction decisions are assess by the computer and a breakdown of the house energy balance is given. The guide and worksheets provide a framework for the program.

* DEVELOPING LIVING SKILLS ($50.00, new for '85)
Prologic

This simulation takes individuals or groups of students through the experience of living independently for one year. They work and carry out social activities, by making decijsions from random choices prompted by the computer. At the end of the period they can assess their financial and social status. By simulating typical events in the life of a young adult in a large city, this product develops a better understanding of the decisions that have to be made, including the values that may be adopted by young people.

* HOW MANY? ($50.00, NEW FOR '85)
Prologic

Calculating the population of animals requires both practical and mathematical skills. This program simulates two counting methods: aerial survey and capture-recapture. Students are able to carry out experiments into estimating the population of a variety of animals found in Australia. The package includes teacher and student notes.

* THE FIRST FLEET DATABASE ($35.00)
Tasmania Media System

A database containing information about the convicts who arrived with the First Fleet in 1788. The contents of the package include the disk, 32 student worksheets, 1 hard-copy print-out of the data and 1 teacher's guide.

* THE ANTARCTIC DATABASE ($35.00)
Tasmania Media System

This database was produced as part of Information Technology Month in 1984. It contains data collected during a voyage in the Antarctic Ocean. It was provided free to high schools and is expected to be made available to others in 1985.

17. APPLE LOGO TEACHING RESOURCES FOR THE APPLE II FAMILY

MINDSTORMS by Seymour Papert

A book by Seymour Papert discussing the philosophy behind LOGO. He discusses the way that computers may affect the way people think and learn. He looks at two major themes - that children can learn to use computers in a masterful way, and that learning to use computers can channge the way they learn everything else. Important reading for all before becoming involved with Logo.

* "AN APPLE FOR THE TEACHER" (Public Domain Video)
Apple Computer

A video produced by Apple Australia late in 1982 for use by teachers. It is in two segments, the first of which covers the general uses of computers and the hardware components. The second section features LOGO and its uses within the classroom. This video is free to be copied and should be found in most educational resource libraries around the country.

APPLE LOGO TOOL KIT - 64K (public domain diskette)
Apple Computer

This consists of two diskettes and a booklet containing information on the programs. The tool kit was developed in the US and is available in Australia. The booklet on the toolkit has been reprinted in Australia and is available in packages of eight from Apple Australia.

* KINDER LOGO UTILITIES DISK - 64K (public domain diskette)
Apple Computer

A diskette of programs to help teachers use LOGO with 5 to 7 year olds. It is a public domain diskette compiled by Diana Ryall (Apple Education Advisor) and is available through the state Computer Education Groups or most dealers. The notes are included on the diskette in a text file.

* LOGO UTILITIES DISK - 64K (public domain diskette)
Apple Computer

A diskette of programs to help teachers use LOGO with children from 7 onwards. It is a public domain diskette compiled by Diana Ryall (Apple Education Advisor) and is available through the state Computer Education Groups or most dealers. The notes are included on the diskette as a text file.

LOGO CARDS ($11.95)
Britannica Education Services

A set of 10 plasticised cards with colourful turtles graphically demonstrating the basic commands of Logo. Each card is about 30cm x 45cm.

APPLE LOGO by Harold Abelson
Byte Books

An informative book by Harold Abelson on the Logo language. It teaches programming techniques through Turtle Geometry. Later chapters illustrate more advanced projects, such as the famous DOCTOR program with its simulated psychotherapist and in INSTANT program than enables parents and teachers to create a programming environment for preschool children.

LEARNING WITH LOGO by Daniel Watt
Byte Books

This book by Daniel Watt offers a thorough introduction to the uses of Logo and teaches the fundamentals of Logo programming through projects that reveal the powerful ideas underlying the language developed at MIT. The early chapters are written with the 10 to 13 year old in mind. More involved projects include interactive games, quiz programs and language activities with words and sentences. There is detailed information on poem-generating programs and animation.

* APPLE LOGO FOR THE CLASSROOM ($20)
Coburn Public School, Richard St., Melton, Vic (03) 743 6685

A useful resource book for teachers working with Apple Logo at the primary level. It contains about 50 sample programs with associated class lesson, hands-on activity and teacher's notes.

GETTING STARTED WITH LOGO
Dataflow

A teacher resource package. It includes a 152 page training manual with 20 easy lessons, 64 blackline masters for worksheets both for computer and seat work and 5 Logo posters that serve as a quick reference guide for the Logo commands.

* TURTLE TOT & OTHER TURTLES
Flexible Systems

Flexible Systems produces a range of turtles which accept commands from within Apple Logo. The Turtle Tot is the cheapest of these turtles. More advanced turtles can move, toot, turn, draw and talk.

DISCOVERING APPLE LOGO by David Thornburg
Micro Computer Books

This book by David Thornburg shows how an Apple computer and the Logo language can be used to learn not only programming fundamentals but also geometry, mathematics and the nature of our physical world.

* LEARNING LOGO ON THE APPLE ($12.95)
Prentice-Hall

A book on LOGO written in Australia by Anne McDougall, Tony Adams and Paul Adams. It provides the next step after the introductory manual provided with Apple Logo. The book is clearly written with sample programs and diagrams. The chapter headings are listed below:

1. Starting up the turtle
2. Editing and Debugging Procedures
3. Turtle Projects
4. Recursion and more turtle projects
5. Naming things and doing arithmetic
6. Recursion and Lists
7. Secret codes
8. Creating a computer poet

* LET'S TALK APPLE TURTLE ($5.95 Kids' Book, $15.95 Teacher/Parent)
Prentice Hall

The first of a series of books on LOGO by Liddy Nevile and Carolyn Dowling. There are two editions, the first for kids and the second for teachers.

The kid's book has twenty work units designed to enable young children to discover for themselves, through LOGO, the concepts of the primary school curriculum such as shape, size, language, spelling and direction. Each unit includes both hands-on and hands-off activities - enough for a full year's work.

The Teachers'/Parents' book gives a lesson plan for each unit with hints on class-room management, educational objectives and valuable tips on how to help children discover for themselves through LOGO.

18. MUSIC SOFTWARE FOR THE APPLE II FAMILY

MICROZINE 2 ($49.95)
Ashtron Software

Melody Maker is one of four programs included on this disk. This program allows students to write music using the computer. The other programs on this disk are: Northwoods Adventure, a Twist-a-Plot story, Ride the Wind, a silulation of flying a hot air balloon and Word Ladder, a word game where the highest score is gained by using the fewest clues.

MICROMAESTRO ($49.95, also requires the Powerpad)
Ashtron Software

This program turns the Powerpad into a piano keyboard. Using two keyboard octaves and a treble staff, this program allow you to play tunes and create new ones. Notation is displayed on the screen, and tunes can be saved on disk and replayed.

MUSIC MAKER ($18)
Bartlett, Mr W.D.

This package privides a simple "programming language" for writing monophonic music which is written in a code adapted to allow simple input. Tunes may be played on the in-built speaker, modified or saved for later use on disk. they may also be converted into binary programs and used in Applesoft. Suitable for both Musical and BASIC applications.

ALPHASYNTAURI & MOUNTAIN MUSIC
Compumusic

Compumusic provides a variety of musical applications for the Apple II family combining hardware and software. The Alphsyntauri Music System consists of Apple compatible peripherals and software. Compumusic also handles the Mountain Music System and other programs such as "Musicland", "Simply Music" and "MusicMaster".

MUSIC LEARNING FUN DISK ($50.00)
Computer Cognition

Teaches and drills in keyboard and staff note names. The program does not make much use of the musical capabilities of the Apple.

MUSIC CONSTRUCTION KIT (new for '85)
Control Data

In this package the blank music sheet, cleffs, notes, rests and other options are displayed on the screen. Icons are used for cut & paste, saving to disk, pointing to options and playing. With optional use of a joystick or koala pad selection is simplified still further. A variety of tunes are already included on the diskette including rock 'n roll, ragtime, nursery rhymes and baroque which may be played as they are or students can experiment with changing notes, key, speed, volume etc. The Apple can play two notes at a time but if the "Mockingboard" is added is will expand this to six notes at a time.

MUSIC THEORY ($49.95)
Edsoft

The program includes 18 music theory programs to provide practice on terms, notations, rhythm, pitch, intervals, scales and chords. The package includes a disk, backup and a 127 page manual

EARLY GAMES MUSIC ($50.00)
Edusoft

A program which illustrates music with fun and theory for primary children. Children may compose music on a keyboard or clef, learn note reading and learn to play simple tunes which may be saved on diskette.

MUSIC MAKER ($66.00)
Edusoft

Sound quality and ease of use make this the choice of novice users and professional musicians alike. Creates and plays four voice music on the Apple II with no additional hardware requirements.

SONGWRITER ($59.95)
Imagineering

Allows students to write their own musical compositions without knowing musical notation. A library of 28 programs is stored on disk and these may be played or editted. A stereo connector is included as well as suggested activities.

SPIDER EATER
Imagineering

This program is an accessory to the Koala Touch Pad. The program teachers note recognition, meter and composition. Music Composer allows the user free selection notes to produce songs. Crazy Sounds produces a variety of sound effects. The accompanying manual provides ideas and musical terms.

PUBLIC DOMAIN PROGRAMS ($2 + disk for members)
N.S.W.C.E.G.

Several public domain programs are available of varying complexity. In N.S.W. look for CEG disk #1 (Musical Writer), #4 (Music Writer) and #8 (MusicMaker). Music Writer and MusicMaker are also on disk #22.

CMU-800R
Roland Corporation

An extensive package for musical applications which allows the addition of up to four synthesisers. Chords of up to 4 notes, seven percussion sounds, variable volume and variable playback tempo are some of the features of this system.

TUNER ($41.00)
Science Education Resources

Provides students with a unique drill that cannot be covered by either text or general classroom presentations. The program begins by sounding two tones on the computer's speaker that are less than a normal half-step apart. The student tunes the second pitch to match the first. The match is evaluated as "right", "close" or "wrong".

INTERVAL DRILLMASTER ($88.00)
Science Education Resources

Provides students with practice in identifying and notating simple melodic intervals. The program has 22 levels of interval training. Students may either enrol in the program where each level must be passed before moving onto the next level or they may use the program without enrolling to review any lesson. Student records are kept for each enrolled student.

SOUNDCHASER
Soundchaser

An extensive musical system combining both hardware and software.

SING ($10.00)
Victorian Education Department

A program developed by the Computer Education Curriculum Project, Queensland for students in years 5 to 9 and now available through the Victorian Department of Education. Musical notes are entered and displayed graphically on the HI-RESolution screen of the computer. The notes are also played by the Apple's speaker. The program will allow students to enter a tune of up to 200 notes. However, once the notes have been displayed on the screen and that page is replaced by another, students may not view those notes again. The program stores the notes as a file which allows ready recall of "tunes". The program is not designed for complex tune creation.

19. APPLE SOFTWARE FOR FOREIGN LANGUAGES FOR THE APPLE II FAMILY

FRENCH/GERMAN/SPANISH VOCABULARY BUILDER ($49.95 each)
Control Data

The vocabulary builder programs are designed to improved students familiarity with foreign languages. Each language activity contains approximately 500 common and useful words divided into ten categories: Basic Words, Personal Words, Numbers, Travel, Verbs, Eating, At Home, Shopping, School, Miscellaneous. Two kinds of drills are provided. The first drill is the familiar "hangman" game where a student must guess the letters in a computer-selected word. The definition is given in one language, and the student must find its counter-part in the other. The second drill is a "pyramid" game where the student "wins" by correctly answering 20 multiple-choice definition questions, thereby completing a pyramid.

FRENCH/GERMAN/SPANISH CLASSROOM WORDS ($49.95 each)
Control Data

The classroom words programs provide drill and practice on words that are helpful to students. The activity contains two kinds of drills. Both drills can be presented in one of three translation modes: Spanish/German/French to English or English to Spanish/German/French or a combination of the two. One drill is the hangman game in which the user must guess the letters in a computer-selected word. The definition is given in one language, and the user must find its counterpart in the other. The other drill is a pyramid game in which the user must correctly answer 12 multiple-choice definition questions to complete a pyramid. The program contains approximately 500 classroom words which are divided into the following ten categories: General, Reading and Writing, Arithmetic, General Science, Plants and Animals, Social Studies, Language, Athletics, Art and Music, Names of Countries.

FRENCH/GERMAN/SPANISH TRAVEL VOCABULARY ($49.95 each)
Control Data

The Travel Vocabulary programs provide drill and practice on words that are helpful to travellers. The activity contains two kinds of drills both of which can be presented in one of three translation modes: Spanish/German/French to English or English to Spanish/German/French or a combination of the two. One drill is the hangman game in which the user must guess the letters in a computer-selected word. The definition is given in one language, and the user must find its counterpart in the other. The other drill is a pyramid game in which the user must correctly answer 12 multiple-choice definition questions to complete a pyramid. The program contains approximately 500 common travel words, divided into the following nine categories: Transportation, Car Travel, Lodging, Sightseeing, Countryside, At the Restaurant, Foods, Health, Communications.

FRENCH/GERMAN/SPANISH VOCABULARY FOR SHOPPING USE ($49.95 each)
Control Data

The Vocabulary for Shopping Use programs are designed to familiarize a person with approximately 500 words that are helpful when shopping in a country. The activity contains two kinds of drills both of which can be presented in one of three translation modes: English to Spanish/German/French, Spanish/German/French to English or a combination of the two. One drill is a hangman game in which the user must guess the letters in a computer-selected word. The definition is given in one language, and the user must find its counterpart in the other. The other drill is a pyramid game in which the user must correctly answer 12 multiple-choice definition questions to complete a pyramid. The programs contain approximately 500 common shopping words, divided into the following nine categories: General, Clothing, Personal Items, Toys and Game Equipment, Tools and Outdoor Gear, Stores and Services, Furniture, Household Items, Groceries.

SPANISH/FRENCH/ITALIAN/GERMAN VOCABULARY DRILLS
Computerland Stores

Provides practice in foreign language vocabulary with three types of drills. These are matching, Foreign-to-English, and English-to-Foreign. The diskette comes with sample lessons, however the user may enter vocabulary from any source. A complete lesson editor which has entry and revision options is provided.

FRENCH 1,2,3 & 4 ($164.54)
Edsoft

These vocabulary drills feature oversize letters to aid in recall and to facilitate classroom use. The students chooses whether he will respond in English or French. French 1 has approximately 200 nouns grouped in topic areas, French 2 about 175 verbs, French 3 has colours, numbers, months and other useful words and French 4 allows the teachers to set up individual lists.

MASTERMATCH ($49.95)
Edusoft

Compete with the computer or a partner as this quiz show invites you to find logical matches in images and words under numbered mystery squares. Players use visual memory, factual knowledge and reasoning skills to win points. The authoring system may be used to create lessons using pictures, concepts and words. Features: combined pictures and words to aid visual learning. An additional subject diskette - foreign languages ($21.95) - has examples in Spanish, French, German and Japanese.

TYPEWRITER ($110.00)
Edusoft

A MULTI-LINGUAL word processor which is easy to use and includes lower case display with no additional hardware. Special character sets for Danish, English, Finnish, French, German, Hawaiian, Hungarian, Italian, Norwegian, Spanish and Swedish. Write letters, reports or any type of text using the special letters for the languages included. Insert, delete or change characters, words, lines or paragraphs. Search for and replace words, phrases, etc. Print text to your exact specifications with almost any printer.

GERMAN/FRENCH/SPANISH FOREIGN LANGUAGE SERIES ($47.95 each)
Edusoft

The products in this series focus on knowledge of various foreign languages at the beginner and intermediate levels, and knowledge of foreign words used in the English language. All diskettes have the special characters required for implementing the particular language and each diskette comes with a resident editor for modifying, updating or expanding the data bases. The authoring system allows for the addition of individual entries or the inclusion of new files. The flexibility of these products makes them ideal as study aids for individuals in the home or classroom. The program focuses on knowledge of German, French and Spanish vocabulary. All special German, French and Spanish characters are included. In all over 800 entries are included. Phrases as well as vocabulary words are provided in the data base for practice and drill.

COMPRENEZ/REPONDEZ ($49.95 each)
Heinemanns

These programs provide structured drill and practice in verb formation. The COMPRENEZ programs present sets of multiple-choice comprehension questions which give practice in translation from French into English. The level of difficulty and type of verb may be set by the user. The REPONDEZ programs test the pupil's knowledge of the present tense by the translations from English into French. These programs are intended for pupils in the first years of a French course, but their applications extend to revision and practice for less able pupils up to their final year.

THE FRENCH GAME ($75 or $95 with backup)
Lindbrook

A high resolution motor car race designed to help beginning to advanced French students build their vocabulary. The package contains about 1000 French words and uses upper and lower case with accent marks. A teacher utility is provided for deleting high scores, listing words and changing questions. High scores are recorded and a choice of easy, medium or hard words is available to the user.

FRENCH/GERMAN TUTOR ($75.00 each)
Lothlorien

The French Tutor and the German Tutor provide an excellent medium for the presentation of new vocabulary, and the drill and revision of old lists of words. New material may be added to the extensive lists provided with the program, using the editor. Lists can be of any length desired, though short lists are recommended for introducing vocabulary and grammatical exercises. This lists can be later "merged", using the built-in facility provided, for test purposes.

HEBREW WORD PROCESSOR AND JEWISH SOFTWARE
Mailsoft

A wide range of software covering Jewish history, festivals and Hebrew for adults and children. Prices range from $29.95 to $119.50. Mailsoft also handles a Hebrew version of Screen Writer II for $475.00.

EDUCATIONAL GAMES PACK #1 ($60.00)
Passionfruit

Vocabulary Tester is one of five programs on this disk for junior secondary. The program tests knowledge of foreign words in two player game. Data files for French and German are included but teachers can easily create their own data files. The other four programs on this disk are based on directed numbers, coordinate geometry, Pythagoras' Theorem and equations.

GAPFIL
Pitman

GAPFIL allows teachers to generate a range of vocabulary and grammar tests. The content and level of material in controlled by the teacher. DISK 1 contains the programs to enter exercise data for seven different patterns of gap-filling exercises. DISK 2 stores the exercise data entered via DISK 1, formats the data into exercises and holds the index program. DISK 3 stores student responses and score records. The pack includes documentation for both the teacher and student. There are character sets in English, French, German, Spanish, Italian and Scandinavian. A dual disk drive is required.

DASHER ($179.00)
Science Education Resources

Dasher allows the creation of language drills for elementary and intermediate students. Dancer, a second program included in the package, allows the teacher to readily create the drills. The teacher supplies the questions and answers and certain specifics about the drill, such as instructions, messages and examples. The teacher can also specify special characters, such as punctuation, considered important in a student's answer; choose whether or not missing puctuation and capitalisation are to be considered errors; specify a limited number of alternate correct answers; and specify whether or not the student must completely retype an incorrect answer. Although the typical format for a drill is full-sentence question and answer, other formats are possible, including fill in the blank, transformations, scrambled sentences, sentence construction, and vocabulary review. The package contains the user guide and four diskettes containing the programs, character sets and text materials needed to create exercises in English, French, German and Spanish.

GERMAN ($40.00)
Tag Software

A software package to help students learn German vocabulary. An easy-to-use program that that features presentation, practice, mastery exercises and games. The package contains two diskettes, each with 10 comprehensive vocabulary topics, one teacher manual and reproducible test sheets to help measure student progress. The author will assist or advise teachers interested in developing these programs to suit their needs. The package includes two diskettes and the user's manual.

VOCABULARY PROMOTER ($25.00 or $15.00 if purchased with German)
Tag Software

This program allows teachers and students to write their own lists of words and to use these lists in the Master Program. The Master Program features the presentation and practice of the new vocabulary list and mastery exercises. The package includes one diskette containing the Vocabulary Promoter and the Master Program and a user's manual. It is suitable for use in German, Indonesian, French and Italian.

GERMAN: THE DEFINITE ARTICLE ($29.95)
Zenith Education Systems

The diskette is suitable for students up to year 10. It covers the definite article, classification, analysis and grammar.

20. GEOGRAPHY SOFTWARE FOR THE APPLE II FAMILY

* OLYMPIC DATABASE ($45)
Aardvark Software

This package includes three programs. The first of these, the Olympic database allows the user to search for particular events or an athlete's name or simply look through the data. The second program the Aardvark World Map shows the home countries of gold medal holders, past locations of the Olympics and allows the computer to test the user on countries and cities. The third of the programs, Aardvark Pictograms, allows the user to choose pictograms or play a pictogram guessing game at two levels.

* ONE WORLD DATA BASE ($110)
Active Learning Systems

A computer reference file of socio-economic information on the countries of our world. Designed specifically for use by upper primary and secondary school students, the package is specifically designed to teach research and interpretative skill, and encourages students to draw conclusions through comparative analysis. The database contains up-to-the-minute information from reputable non-government and government sources, accurate to January, 1984. The scope of information in the database covers: Climatic Information, Economic Details, Import/Export, Political Conditions, Geographic Neighbours, Currency, Percentage Workforce in Manufacturing, Percentage Workforce in Services, Percentage Workforce in Primary Industry, Main Languages, Religions, Population Details, Main Trading Commodities, General Workforce Statistics, Political Background, Main Population Centres, Percentage Population Urban, Physical Area, Percentage Forest, Percentage Desert, Literacy Rates, Treaties and Alliances and Much More.

* HOMETOWN ($110)
Active Learning Systems

This package allows students to store and analyse information collected in field surveys. The database has 9 open fields which enable students to include information of special interest. The activities involved in the use of this package include: sampling, collecting and recording data, collating information, problem solving, graphing, interviewing, map reading, interpreting results, discussion and debating.

* AUSTRALIA A PROFILE ($110)
Active Learning Systems

This package allows students to compare different regions in Australia. The data provides a comprehensive source of statistical information designed to encourage students to analyse information and to draw conclusions. The census information includes: population, population growth, age distribution, school leaving age, ethnic origin, income, housing, employment, industrial and agricultural activity.

AUSTRALIAN TOURS ($42.95)
Ashtron Software

A simulation game in which you play the role of a tour guide at Australia Tours, a tourist agency. Skills are developed in geography, history and economics.

VOLCANOES ($49.95)
Dataflow

A game of strategy and cooperation for two to four players suitable for high school students. The program illustrates how volcanologists study potentially active volcanoes. The object of the game is to accurately predict volcanic activity, warn the local inhabitants and stay within a budget. The game has a 'save' option so that players can continue a game at a later time. Maps of the volcanic area are provided. The package contains teacher notes and software on diskette.

THE GAME SHOW ($49.95)
Edusoft

An educational tool for vocabulary development, this entertaining computer game uses animated color graphics with the appearance of a TV game show. Varied subjects - biology to famous cities to nursery rhymes to advanced vocabulary and more. An easy to use authoring system allows you to add your own subjects. Lessons in 15 subject areas are included with the package. An additional data disk called PEOPLE, PLACES AND THINGS is available for $21.95.

MASTERMATCH ($49.95)
Edusoft

Compete with the computer or a partner as this quiz show invites you to find logical matches in images and words under numbered mystery squares. Players use visual memory, factual knowledge and reasoning skill to win points. Use the authoring system to create your own lesson using pictures, concepts and words. Features: combined pictures and words aid visual learning. Memory is enhanced whilst learning vocabulary and concepts. Flexible teaching strategy is adaptable to any subject area. An additional data disk called MATH AND SOCIAL STUDIES is available for $21.95

CLIMATE ($49.50)
Heinemann Computer in Education

Climate recognition is an essential part of middle-school geography but a topic which pupils often find tedious to practise. This program will make the necessary reinforcement much more attractive, particularly through its imaginative use of graphics. Suitable for 14-16 age group.

WEATHER ($49.50)
Heinemann Computer in Education

This program provides a bank of data in the form of synoptic charts which can be used to teach elementary meteorology. Data from weather stations (temperature, wind speed and direction, cloud cover, and weather conditions) may be displayed and their relationship with isobars and fronts (which may be super-imposed on the weather map) can be discussed. The weather system can be moved across the screen, allowing elementary ideas of weather forecasting to be introduced.

SCAVENGER HUNT ($35.00)
Jacaranda Wiley

Up to four players set out on a scavenger hunt in which each must find five objects located on the colourful computer display. In moving their stick figures about, students must negotiate certain obstacles. For example, figures can't go through a fence except by a gate, and there is a creek which can't be crossed except by a bridge. Scavenger Hunt provided an opportunity for students to apply the basic mapping skills of: identifying and using the eight major compass points, and estimating distance. Students must plan a strategy and there is plenty of opportunity to develop problem-solving skills. Scavenger Hunt is related to the "Lost and Found" section of Moving into Maps and is supported with a student's guide and a teacher's manual.

SHEEP-DOG TRIAL ($35.00)
Jacaranda Wiley

Sheep-Dog Trial is a game for two, where students will be using alpahnumeric grid square references. Each student controls a sheep dog and must send the dog out into the paddock to split five sheep from a mob of ten, and muster them into a pen. The "paddock" is a grid and the sheep are in grid squares. To muster the sheep, students must send their dog to a grid square next to a sheep. The aim is to muster sheep as quickly as possible. Allowing for the vagaries of sheep, this can be a fascinating and testing pastime! As well a providing a challenging grid-reference activity, Sheep-Dog Trial requires logical thinking and co-operative strategy planning if sheep are to be mustered quickly. Sheep-Dog Trial is related to the "Where is it?" section of Moving into Maps and is supported with a student's guide and a teacher's manual.

QUICK CARTAGE COMPANY ($45.00)
Jacaranda Wiley

Quick Cartage Company provides drivers and vehicles for the picking-up and delivery of goods to various sites in the city and local areas. Up to four students are the drivers, and they must plan their route for their daily delivery run by choosing vehicles appropriate to the task required and the distance to be travelled. Several different-scale maps need to be consulted. Drivers must plan their routes carefully, and cope with a number of factors such as flat tyres and petrol consumption. Quick Cartage Company provides an opportunity for students to develop the skill of understanding and using scales. Also, as drivers, they are expected to obey basic road rules and avoid inviting calamity by reckless overtaking. Quick Cartage Company is related to the "How Big?" section of Moving Into Maps and is supported with a student's guide and a teacher's manual.

CUNNING RUNNING ($45.00)
Jacaranda Wiley

Up to four primary students at a time may practise the basic skills of reading and understanding map language, understanding compass directions, and using alphanumeric grid-square references.

· GOLD-DUST ISLAND ($49.00)
Jacaranda Wiley

A group of 2 to 5 players (survivors from a shipwreck) must try to make life on Gold-Dust Island both safe and successful. Each player's activity on the island is determined by the tools he or she has, in addition to the expectation that a cyclone or a rescue ship may arrive. Players must ensure a good water supply and decide to either concentrate on boat building or gold digging. If a cyclone arrives, players will only be "saved" if they can escape in the boat they have built. However, if a rescue ship arrives, it will save all players who have not died from dehydration. In Gold-Dust Island, "survival" is entirely in the hands of those playing; players must cooperate if they are to be successful. A strategy must be planned, using the various skills of the players for the benefit of all. Therefore, Gold-Dust Island can be played many times, even by the same group of students.

* RAFT AWAY RIVER ($49)
Jacaranda Wiley

This is an adventure simulation that provides students with an opportunity to develop skills in reading comprehension, communication, co-operative behaviour and problem-solving. From two to six players work to survive by fishing, collecting food and wood for the fire.

* BUSHRANGER DATABASE (new for '85 about $95)
Knoware

Provides not only direct data about the bushrangers, but also ballads and a dictionary capability so students can check the meaning of unknown words in the ballad. It is well supported with worksheets and will provide a valuable resource for schools.

* THE AUSTRALIAN GEOGRAPHY TUTOR ($75.00)
Lothlorien Software

The Australian Geography Tutor is a map-orientated program designed to present material to students, to test their knowledge of newly presented material and to provide a merged listing to revise all material presented. Again the immediate, corrective feedback system is utilised so that students gain the maximum benefit in the minimum of time. Entry of new material is again a very simply matter. The flashing cursor is moved to the appropriate position on the map, the computer records the co-ordinates, the information concerning the location is typed and the "return" key is pressed. The new information is then recorded on the target diskette and the flashing cursor prompts you for the next entry.

THE SEARCH SERIES
McGraw-Hill

These five outstanding simulations promote critical-thinking skill while teaching social studies and science content. Best of all, an entire class of students can simultaneously go on a Search. The diskette handles all record-keeping for the simulation. Each Search comes in a vinyl binder with a teacher's manual, 20 reorderable student handbooks, and a diskette.

a) GEOGRAPHY SEARCH ($225.00)

Puts groups of students on ancient ships searching for the New World. Through the computer, they navigate using the sun, ocean depth, climate, and trade winds.

b) GEOLOGY SEARCH ($225.00)

Sends students off exploring for oil. As the computer "performs" geological tests, students learn about rocks, fossils, and underground structures in order to make decisions on drilling.

c) COMMUNITY SEARCH ($225.00)

Sets students down in an ancient society forced to leave its ancestral home. They face choices about migration, occupations, trades, aggression, and building a palace.

d) ENERGY SEARCH ($240.00)

Has students manage an energy factory and recreate the exciting steps taken in search of new energy sources.

e) ARCHEOLOGICAL SEARCH ($225.00)

Charges student research teams with the task of organizing the excavation of a newly discovered historical site. Students collect data and formulate theories about origins of the people who once lived there.

SIMULATION ANNAM: THE STUDY OF A DEVELOPING COUNTRY ($59.00)
Micro Nationwide

"You are the leader of a developing country that is aided by a superpower and in rivalry with an aggressive Communist neighbor. You have a small standing army, many different interest groups, rivals at high levels, and you must remain popular to govern. The computer poses problems which you must solve, but your decisions invariably lead to changes in conditions and more decisions. Working through this program is an exciting way to promote an understanding of contemporary world affairs by seeing the impact of your leadership decisions upon the fate of your small nation - and on your own ability to remain in control." Conditions are presented at random, so there are many possible endings. Students use the game over and over again to discover the consequences of various decisions and to find the most appropriate responses to given situations. The microcomputer becomes a complete learning tool.

SOUTH DAKOTA
Micro Nationwide

This program, based on a grain growing farm, provides an easy to use simulation for students from year 5 onwards. It highlights the problems faced by small businesses, the application of mathematics and how economic theory works. The user controls the crop to be planted, the number of helpers to be hired, the abount of seed purchased and the type of livestock to be purchased (if any). Finance can be from the sale of land, bank loans or sale of crops. The cost of land fluctuates and money is needed to clothe and feed the family. Taxes are also collected based on what you earn from the harvest.

* THE CONVICTS ABSCONDED ($3 + disk for members)
* THE CONVICT PHYSICAL FEATURES ($5 + disk for non members)
N.S.W. Computer Education Group

The Convicts Absconded and The Convict Physical Features data bases were based on data from the Quarterly Return of Absconded Convicts in the Colony of NSW. The Convicts Absconded data base contains 11 fields for each record and provides general information on the convicts, including details about their time in Australia. Fields include: Year of Arrival in Australia, Trade, Native Place, From Whom Escaped and From Where Escaped. An additional data base, Convict Ships, accompanied the main data base.

The Convict Physical Features data base contains fifteen fields for each record and is concerned with the physical appearance of the convicts. Each of the data bases was formed using the Teacher's Database by John Messing. Each data base requires 64K. An accompanying handbook is also provided.

GEOGRAPHY - ORIGINAL PACK ($92.50 - for seven programs)
Pitman

a) FARM GAME: A simple crop-planting game.
b) SOUTH-EASTERN RAILWAY GAME: A simulation of the building of rival railways in historical times in SE England.
c) JOINT STOCK COMPANIES: A simulation involving five rival companies sailing cargo vessels in the seventeenth century.
d) WINDMILL GAME: The siting of windmills to grind wheat on an island simulating a weight-loss industry.
e) DRAINAGE BASIN MORPHOMETRY: This program calculates Bifurcations Ratio, Drainage Density and Constant of Channel Maintenance; and creates graphs drawn on the relationship between stream order, number of streams and their average length.
f) HUMAN POPULATION GROWTH: Calculates the future size of population and examines details of change within the population pyramid.
g) STATISTICS FOR GEOGRAPHERS: presents an analysis of geographical data.

COMPUTERS IN THE CURRICULUM PROJECT: GEOGRAPHY ($49.95 each)
Pitman

To provide students, through games, with an appreciation of decision making in the real world. The students handling of bulk material from which geographical interpretations will be made is enhanced by the computer's accuracy and speed. These programs provide a variety of role-playing simulations. Each pack includes a Teacher's Booklet and Students' Leaflets.

a) MOTORWAY ROUTE
A unit on the impact of decisions upon route planning.

b) MALTHUS
A Malthusian model to examine population dynamics in relation to food and energy resource supplies.

c) SAILING SHIPS GAME
A navigation exercise related to the world's wind belts and their seasonal movement.

d) PREDICTING JOURNEY PATTERNS
A chance to examine the impact of gravity models on a variety of students' chosen locations and attraction ratios.

e) FARM RESOURCES GAMES
A farm game whereby the students paln crop production in the light of their seasonal manpower requirements.

f) HILL RAILWAYS
A chance to relate the building of Victorian railways to a consideration of shape and gradient.

g) RICE FARMING
A game whereby students can act as Indian farmers planning for the maximum use of land with factors such as High Yield Rice, Wells, Fertilisers and Pesticide.

h) WATER ON THE LAND
An exercise simulating the flows and stores of water on an area of land after rainfall.

i) PROSPECTING GAME
A chance to act as prospecting companies exploring and mining in an underdeveloped area with mineral potential.

j) URBAN GROWTH SIMULATION
An exercise that allows the student to predict, retrospectively, the growth of a market town, and its likely spatial features.

k) URBAN WELFARE
This program provides the 1981 UK Census data and enables students to analyse the criteria and effectiveness of establishing urban deprivation.

TELLSTAR ($120.00)
Ramware

An astronomy package allowing the user to study the stars in any section of the sky at any time of the year.

STAR SEARCH ($58.50)
Science Education Resources

This program supposes the existence of a star base on PLUTO.The user searches the planets for the origin of a signal detected by a satellite scanner and in so doing learns about the various planets. Package contains Teacher Notes and Software.

OIL RIG ($49.50)
Science Education Resources

A simulation of a search for oil and natural gas. The student uses seismic data to map underground rock layers and to identify two common types of oil traps. Realistic geological history and master sheets necessary for mapping and exploration are provided in the Teacher Guide.

DEMO-GRAPHICS ($99.00)
Science Education Resources

Population growth and change. Can be used to project multi-national populations given current trends; and facilitate understanding of demographic dynamics and the impact of both real and simulated factors affecting the growth of world populations. The programs include 1980 data on population, fertility and mortality for 40 countries. The package contains Instructor Notes and software on diskette. Additional notes containing student activities have been especially prepared by a Victorian Biology teacher.

* ISLE OF WHAT ($50.00)
Soil Conservation Authority

This is a simulation/role-play program that illustrates the purposes and procedures of land capability assessment, land management and land use decision making. It is appropriate for geography and environmental studies from year 9 to 12.

* THE ANTARCTIC DATABASE ($35.00)
Tasmania Media System

This database was produced as part of Information Technology Month in 1984. It contains data collected during a voyage in the Antarctic Ocean and was provided free to high schools, and is expected to be made available to others in 1985.

INTRODUCTION TO WEATHER CHARTS ($29.95)
Zenith Education Systems

This program covers weather charts, air masses, pressure zones and synoptic charts and refers directly to Australia.

21. ECONOMICS/COMMERCE SOFTWARE FOR THE APPLE II FAMILY

COMPUTER APPLICATIONS PROJECT ($75.00)
Addison Wesley

The four programs included in the Computer Applications Project show how computers are used in our society and cover four applications: Airline Reservations, Personal Banking, Supermarket Stock Control and Taking a Census. A student book provides background information, exercises and sample questions for each of the applications. Each package contains four student books, a teacher's guide and two diskettes (a master and backup). Extra student books in packs of 5 are available.

* DEBTORS ($35)
Angle Park Computing Centre

A package including student exercises to introduce business education students to the concepts and procedures involved in using an electronic debtors ledger.

* PAYROLL ($35)
Angle Park Computing Centre

This package is similar to the debtors package and is useful to illustrate the process and concepts involved in electronic payroll functions.

* PLAN ($30)
Angle Park Computing Centre

An economics simulation involving the principles of a planned economy. The user manipulates labour, capital and land to produce a maximum output economy.

* INDEX ($30)
Angle Park Computing Centre

An economics simulation allowing the user to produce price indices and compare them to a user selected base index.

EDUCATION CLASSICS ($35)
Apple Computer

Lemonade, one of seven programs on this double sided diskette, is a business simulation game that combines math drills with business acumen. The player tries to make profits each day from his or her lemonade stand by estimating the number of glasses that will be sold, setting the price per glass, forecasting the cost of material and advertising and anticipating the effect on sales of changes in the weather.

APPLEWORKS ($250)
Apple Computer

An integrated word processor, filing program and spreadsheet. This program provides the perfect tool for demonstrating the major applications of computers in business. See the section on Administration Software and Teacher Utilities for further details.

* SMART- THE CASH COMPUTER ($150.00)
Computer Programs Machines & Services

The cash computer provides an easy to use system for managing a small business. It provides functions to control stock on hand, individual items sold, re-order levels, banking summary, debtors statements, calculates change and keeps track of cash, cheques, cards and change.

* THE BOOKKEEPER'S FRIEND ($85.00)
Computer Programs Machines & Services

A cash book which is easy to use and fully menu driven. It supports profit and loss balance sheets, allows the entry of receipts and expenses to produce trading profit and loss balance sheets and provides a variable chart of accounts. A useful program both for administration and for economics/commerce students.

ELECTRONIC MONEY ($49.95)
Control Data

The program is divided into two lessons. Lesson one guides the students through a short history of money emphasizing money's function and its ever-changing form. Lesson two involves the students in the use of a computer program called Electronic Money in which the stud;ents simulate the use of electronic money transfer to manage an ordinary family budget.

BUSINESS EDUCATION VOLUME 1: UTILITIES ($69.95)
Edsoft

A collection of tutorials and problem-solving programs covering interest on installment buying, effects of simple and compound interest, loan amortization, business financial reports, money supply and payroll. Support materials provide worksheets and input forms for use by students.

BUSINESS EDUCATION VOLUME 2: PAYROLL ($69.95)
Edsoft

The package contains a set of information processing programs that allow a class to set up and experiment with a computer-based payroll system. These programs and support materials provide experience in creating data files for a hypothetical company payroll.

BUSINESS EDUCATION VOLUME 3: ACCOUNTING ($69.95)
Edsoft

The program provides realistic experience with a computerized accounting system and includes general ledger, accounts payable, accounts receivable and inventory control.

ACCOUNTS I/ACCOUNTS II ($49.50 each)
Heinemann

Two programs which give practice in introductory accounting including double entry bookkeeping to trial balance preparation of balance sheets and profit and loss accounts. Accounts I is designed to reinforce and clarify the procedures involved in keeping accounts, while Accounts II is a simulation in which the user assumes the role of a small wholesaler.

SOUTH DAKOTA
Micro Nationwide

This simulation, based on a grain growing fram, provides an easy to use simulation for students from year 5 onwards. It highlight the problems faced by small businesses, tha application of mathematics and how economic theory works. The user controls the crop to be planted, the number of helpers to be hired, the amount of seed purchased and the type of livestock to be purchased, if any. Finance can be from the sale of land, bank loans or sale of crops. The cost of land fluctuates and money is needed to clothe and feed the family. Taxes are also collected based on what is earned from the harvest.

COMPUTERS IN THE CURRICULUM PROJECT: ECONOMICS ($49.95 each)
Pitman

The programs provide a variety of simulations to illustrate the relationship between economic theories and the real world.

a) CALCULATORS UNLIMITED
A business game based on a firm producing calculators.

b) RETAIL PRICE INDEX
An exercise showing the relationship between the price index structure and real prices.

c) GROWTH AND FIXED EXCHANGE RATES
A game framework to illustrate the implications of fixed exchange rates for domestic economic policy.

d) COST BENEFIT ANALYSIS
A case study using the simulation of the management of a branch railway line.

e) PRICE DISCRIMINATION
An exercise in discriminating pricing

f) COMPETITION, MERGERS AND CONTROL OF MONOPOLY
A game to illustrate the pressures towards collusing and merger in a competitive industry.

g) CIRCULAR FLOW OF INCOME
A moving blackboard exercise to introduce stage-by-stage the circular flow of income.

h) WAGE THEORY
The marginal revenue productivity theory of wages applied to different labour markets.

i) EQUI-MARGINAL UTILITY
A game that aims to relate the topic of marginal utility to the way people actually act when arranging their spending.

BASIC MACROECONOMIC MODELS ($69.95)
Pitman

This diskette contains three programs aimed to improve students' understanding of basic macroeconomic concepts and to introduce the first principles of macroeconomic policy making.

ORIGINAL ECONOMICS PACK ($92.50)
Pitman

A series of nine programs. Elasticity of Demand includes maximising revenue from a tax and a motor bike gems. Price Fluctuations - the cobweb theorem as an explanation of agricultural and commodity cycles.

* DEVELOPING LIVING SKILLS ($50.00, new for '85)
Prologic

This simulation game takes individuals or groups of students through the experience of living independently for one year. They work and carry out social activities., by making decisions from random choices prompted by the computer. At the end of the period they can asses their financial and social status. The aim is to survive financially for a year while facing all the temptations, tribulations and rewards present in real life.

BIZNES ($92)
Science Education Resources

This simulation of a business helps students understand the economic theory of the firm. Students enter basic decisions about capital, labour, and price. The program reports the results of these decisions - how much the business will produce, how much it will sell, and whether or not it will make a profit. Economic reasoning is emphasised as are the three main contraints in business: the demand curve, production function and supply of resources. A workbook and manual are included.

SEASEN SMALL BUSINESS ACCOUNTING SYSTEM ($30.00, $25.00 for cash)
SEASEN SINGLE ENTRY ACCOUNTING SYSTEM ($18.00, $15.00 for cash)
Seasen Software

This package contains the aspects of computer accounting most needed for conducting a small business, including entry of information about transactions, printouts of balance sheets and details of past transactions, bank reconciliation and budgeting. The Single Entry system is simplified.

FREE ENTERPRISE ($150.00)
SRA

Free enterprise is a business simulatioon in which the participants run companies making the same type of product. Up to six individuals or teams can participate. Or one or more participants can interact with computer players simulating competition among up to six companied. Each company may sell its product in its own geographic home area, in the home areas of its competitors, and in a common markegt area equally accessible to all. The measure of success can be stock price, overall profit, or some other agreed-upon criterion. There are three levels of difficulty making it suitable for beginners and remaining a challenge for experienced players. Some variables may be set by participants or a teacher and the results can be saved and recalled if competition continues from day to day.

CASHBOOK
Zofarry Enterprises

Cashbook is a computerised accounting system for the Apple // and //e and performs the same functions as a manual cashbook. Cheques and deposits may be divided into over sixty "codes". Cashbook breaks up the amounts month by month in each code area.

SECONDARY MATHEMATICS PROGRAMS FOR THE APPLE II FAMILY

NOTE : Other programs which may be used for revision or remedial work at the secondary level will be found in the section on Primary Mathematics.

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COMPUTER GRAPHING EXPERIMENTS 1 ($50.00)
Addison Wesley

Students create and compare graphs of linear and quadratic functions and inequalities, absolute value, polynomials, exponential and logarithmic functions. The package contains a diskette, backup diskette, black-line masters, answers and teacher notes.

COMPUTER GRAPHING EXPERIMENTS 2 ($50.00)
Addison Wesley

Students create and compare graphs of sine, cosine, tangent and cotangent, including the concepts of period, amplitude, phase shift and polar co-ordinates. The package includes disks, black-line masters for student worksheets, answers and teacher notes.

COMPUTER GRAPHING EXPERIMENTS 3 ($50.00)
Addison Wesley

Students create and compare graphs of parabolas, ellipses, hyperbolas, general quadratic functions and inequalities involving conic sections.

* CARTESIAN GAMES ($18)
Bartlett Software

This diskette contains four games using cartesian co-ordinates. The first, Treasure Hunt, uses a 9x9 grid (positive whole numbers) and is suitable for upper primary and lower secondary. Spotlight Burglary, the second, uses decimal co-ordinates in all four quadrants. Fly Trap uses linear equations to trap the most flies in the minimum area. The fourth program, Duck Shoot, for upper secondary students uses equations of conic sections to shoot ducks.

* ALGEBRA ATTACK ($20.00)
Computer Cognition

A program using a maths invaders format to reinforce basic algebra. It includes topics such as solution of equations,

* BASIC ARITHMETIC AND ALGEBRA ($79.95)
Computer Tutor

This program is based on the NSW HSC Two-Unit Mathematics Course. It is, however, also a valuable resource for students in years 7 to 10 and adults who wish to learn mathematics. Learners need little prior knowledge and work at their own pace. The material is presented in small steps, and after each step the learner is tested. If the question is answered incorrectly the material is presented again, sometimes with extra explanation.

PROBLEM SOLVING STRATEGIES ($49.95)
Control Data

Two interactive tutorials teach students the strategies of trial and error, exhaustive listing and simplifying the problem. Students collect data, create charts, find patterns and make generalisations. Two other programs challenge students to apply the strategies to more complex, open-ended problems.

ELEMENTARY ALGEBRA ($59.95, $64.95)
Control Data

Each of the nine subject areas is covered by two packages, the first to teach, the second to review.

a) EQUATIONS & INEQUALITIES
Solving linear equations and inequalities, using number lines to represent the solution set.

b) EXPONENTS, ROOTS & RADICALS
Evaluating numerical expressions containing exponents or radicals.

c) FACTORING
Writing polynomial terms as the product of other polynomials.

d) GRAPHING LINES ON A PLANE
Graphing numbers and linear equations on a coordinate plane. Includes concepts of slope, y-intercept, and parallel and perpendicular lines.

e) POLYNOMIALS
Adding, subtracting, multiplying and dividing polynomials.

f) QUADRATIC EQUATIONS
Solving quadratic equations using factoring and the quadratic formula.

g) RATIONAL EXPRESSIONS
Adding, subtracting, multiplying rational expressions.

h) SIGNED NUMBER OPERATIONS
Evaluating and simplifying numerical expressions and the arithmetic of signed numbers.

i) SYSTEM OF EQUATIONS
Solving systems of two linear equations using graphical substitution, or the addition method of solution.

ALGEBRA DIAGNOSTIC TEST ($69.95)
Control Data

A diagnostic testing program to test the nine sections of Elementary Algebra.

INTEGERS: INTEGERS AND INTRODUCTORY ALGEBRA ($39.95)
Control Data

Covers the concepts of integers, operations and variables.

MOTIONS: TRANSFORMATION GEOMETRY ($49.95)
Control Data

This provides a microworld in which to perform translations, rotations, reflections, combinations of transformations and a command to defined new transformations in terms of the existing ones.

NUMERICAL AIDS: A NUMBER THEORETIC TOOLKIT ($39.95)
Control Data

A collection of tools to aid students to investigate properties of whole numbers and integers such as prime numbers and the relationship between prime factorisation and divisibility.

TREE DIAGRAM: PROBABILITY ($39.95)
Control Data

The program allows students to translate probability questions into tree diagrams. Concepts include conjunctive and disjunctive events, conditional probability and expectation.

MATHS SKILLS PACK ($74.95)
Edusoft

A teacher modifiable program for testing maths skills. Topics covered on the two disks include: algebra, geometry, word problems, pie charts, line plots, bar graphs, geometry construction and flow charts.

ALGEBRA 1 (49.95)
Imagineering

Each unit of algebra may be approached in one or more ways. Students may work sample problems, read a discussion of a concept, watch as an equation is solved step-by-step, or study the rules which govern an operation. Algebra 1 covers five learning units: definitions, number line operations, sets, evaluating expressions and rules for equation reduction.

ALGEBRA 2 ($49.95)
Imagineering

See Algebra 1 for a general description. Algebra 2 covers: addition of real numbers, multiplication of real numbers, solving inequalities and solving equations and problems.

ALGEBRA 3 ($49.95)
Imagineering

See Algebra 1 for a general description. Algebra 3 covers monomials and simple factoring of binomials, polynomials and quadratic trinomials.

ALGEBRA 4
Imagineering

Algebra 4 covers introduction to graphing, coordinates in a plane, linear equations, solving systems of linear equations, variation and inequalities.

ALGEBRA 5 & 6 ($64.95)
Imagineering

Covers irrational numbers, radical expressions, finding square roots, quadratic equations, quadratic inequalities, pythagoras' theorem.

MATH FOR EVERYDAY LIVING ($99.00)
Micro Nationwide

This program looks at real-life math and business skills in 10 simulation programs. They include: paying for a meal (addition and subtraction), working with sales slips (multiplication), unit pricing (division), saving on transportation (division), sales tax (percent), finding your job (multiplication), earning with overtime (fractions), earning with commission or piecework (multiplication and percent) and finding the net pay.

ALGEBRAIC EXPRESSIONS ($49.95)
Micro Nationwide

This package contains two programs: rewriting phrases as algebraic expressions and evaluating algebraic expressions. The programs have both a tutorial section and an evaluation section.

EQUATIONS ($59.00)
Micro Nationwide

Three programs on the solution of equations: one variable and one operation, one variable and two operations and variables on both sides. The equations are generated randomly.

GRAPHING ($49.95)
Micro Nationwide

Two programs are included: introduction to graphing on the coordinate plane and plotting points on the coordinate plane.

GRAPHING EXPONENTIAL EQUATIONS ($24.95)
Micro Nationwide

The program begins with a review of exponents and how they are calculated and then illustrates the way in which they are plotted.

* EDUCATIONAL GAMES PACK #1 ($60.00)
Passionfruit Software

This diskette contains five programs for the junior secondary child. Catch the Spies: covers co-ordinate graphs and Pythagoras' Theorem. Directed Numbers: has four levels of difficulty in this board game for two players. Equations Game: The two players are given first order equations of varying difficulty to answer. Pythagóras' Rule is a teaching program that explains the nature of this theorem with drawings and text. The fifth program, Vocabulary Tester, tests the knowlege of foreign words. Data files in French and German are included but teachers may readily form their own files.

* MATHS FOR THE REAL WORLD (approx. $35.00)
Pitman Publishing

This disk contains nineteen programs based on material contained in the textbook Maths for the Real World by Evelyn Kahn and Noel Cary, but can also be used independently. The programs include examples of how computers are used in everyday and typical business situations.

ALGEBRA DRILL AND PRACTICE 1 ($149.00)
Science Education Resources

A program covering algebraic signs, operations with numeric and algebraic fractions, percentages, equations of lines, simplification of algebraic expressions and word problems. This program provides drill, practice and help with basic algebra with detailed step-by-step solutions. It includes an instructor's manual and two diskettes.

ALGEBRA DRILL AND PRACTICE 2 ($149.00)
Science Education Resources

Covers decimal arithmetic, absolute numbers, solving equations and inequalities involving absolute values, simplifying expressions with integral exponents, factoring linear and quadratic expressions (binomials and trinomials), linear algebraic equations, and others. It includes and instructors guide and two diskettes.

ARBPLOT ($149.00)
Science Education Resources

This package can be used to demonstrate plotting curves in explicit or parametric form in rectangular or polar coordinates, bounded or un-bounded, continuous or discontinuous. The teacher may illustrate calculus concepts such as limits and derivatives, integration, sequences and series and methods of finding roots. The instructor's guide included 30 problems to demonstrate these concepts and has instructions to describe how a teacher may prepare a sequence of graphic illustrations.

DISCOVERY LEARNING IN TRIGONOMETRY ($95.00)
Science Education Resources

This package uses discovery learning to introduce students to trigonometric functions and their visual representations. The material covered includes functions, trigonometric functions, amplitude, period phase shift and polar coordinates.

GRAPHING EQUATIONS ($85.00)
Science Education Resources

Four programs are contained in this package. The first, Linear and Quadratic Graphs gives students practice with equations of lines, parabolas, circles, ellipses and hyperbolas. Green Globs is a game where the student tries to hit as many of the 13 globs on the coordinate grid as possible. Students enter equations which are plotted on the screen. Higher scores are earned by hitting more globs with each shot. The third program, Tracker is a game using linear and quadratic graphs. The object is to find hidden graphs and determine their equation. The fourth program, Equation Plotter is a utility program that plots graphs entered by the student. The program plots conics, absolute values, square roots, logarithmic, exponential and trigonometric functions.

INTERPRETING GRAPHS ($70.00)
Science Education Resources

This package has two programs. The first, Relating Graphs to Events, is a series of 20 exercises, each of which plots three graphs on the same axes. An event is described and the student has to determine which of the graphs represents the event. The second program, Escape, uses a coordinate grid as a city map. The students sets blockades to trap bank robbers who are escaping from the centre of the city to the edge of the grid.

* TEACHING MATHEMATICS WITH A COMPUTER - VOLUME 1 ($35.00)
Science Education Resources

This disk contains 10 drill/demonstration programs including area, enlargement, graphs, order of operation, functions, regions, number plane, simultaneous equations, solving equations and trigonometry. Other files on the disk includes a character generator to permit the mixing of text and graphics and a character maker to allow creation of you own shapes for use in the picture graph routine.

* TEACHING MATHEMATICS - VOLUME 2 ($35.00)
Science Education Resources

Comprises 12 teaching programs including decimals, directed numbers, expansions, factorising and surveying.

CACTUS PLOT ($69.50)
Science Education Resources

Allow plotting of linear, quadratic, exponential, logarithmic and trig functions singly or in combinations.

SPECIAL PRODUCTS AND ALGEBRAIC FACTORS ($49.00)
Science Education Resources

Drill and practice with the distributive law, binomials, trinomials and quadrinomials, plus exercises with factors.

INTRODUCTORY ALGEBRA ($49.00)
Science Education Resources

Exercises utilising distributive law, binomials, trinomials, substitution, division of terms and more.

LOGIC AND EUCLIDEAN GEOMETRY ($49.00)
Science Education Resources

This program gives a brief history and teachers 9 forms and offers exercises.

MATHEMATICS VOLUME 1 ($27, $24 for cash)
Seasen Software

A range of activities are included on this diskette covering the topics of plotting points, angle measurements, drill in the solution of equations, plotting equations using rectangular or polar coordinates.

MATHEMATICS VOLUME 3 - GEOMETRY ($27, $24 for cash)
Seasen Software

The concepts of area and perimeter are covered for quadrilaterals and triangles.

EXPLORING TABLE & GRAPHS 1 & 2 ($44.95 each)
System Peripherals

Students are able to experiment with tables of data formed from their own results of games and other activities. They are required to interpret this data, using bar, line and area graphs.

* RIME PACK A ($25.00)
Victorian Government Bookshop

This program demonstrates that the microcomputer is a useful tool for investigation in real life. The diskette contains programs relevant to computer-specific lessons. Also included is a handbook called Making Sum-Think Happen.

SCIENCE SOFTWARE FOR THE APPLE II FAMILY

* LENS ($35)
Angle Park Computing Centre

A computer simulation of a ray passing through a spherical lens. The lens surfaces are spherical in cross section and may be a combination of convex and concave curvatures. The refractive indices of the lens and surroundings can be altered to simulate various situations.

SPOTLIGHT ($75)
Apple

Includes two programs requiring paddles or a joystick which provide a game format for the study of reflection of a light beam by a mirror.

* PRECIPITATION REACTIONS ($39.95)
Chemistry Associates

This program covers precipitation reactions of 27 positive ions, 15 negative ions, 84 precipitates and 45 coloured solutions. Students are introduced systematically to the rules for solubility and are given diagnostic tests both on the rules and the precipitate colours. Students do an achievement test of 10 items taken from a bank of 55 items. The teacher has access to all data used by the student via either the screen or a printer.

* GALVANIC CELLS ($39.95)
Chemistry Associates

This program uses high resolution graphics and animation to study all of the possible galvanic cells. The interior of the dry cell is examined and the student writes the anode and cathode reactions with prompting from the program after 3 incorrect attempts. The lead-acid accumulator in both the discharging and recharging conditions is studied. The hydrogen/oxygen fuel cell and the E conventions is introduced to predict whether redox reactions will occur.

* CHEMICAL EQUILIBRIUM AND THE HABER PROCESS ($39.95)
Chemistry Associates

This program uses high resolution graphics and animation to illustrate the nature of dynamic equilibrium in a chemical system. The program also shows the application of the equilibrium law to determine equilibrium constants and equilibrium concentrations. A short test is added at the end of the program, the results of which are stored on the diskette and may be accessed by the teacher at a later time.

* WRITING CHEMICAL FORMULAE ($39.95)
Chemistry Associates

This program takes students through the systematic stages of writing formulae for the elements, ionic compounds and molecular compounds. The symbols for the more common elements are introduced as well as their atomicity.

PHYSICS - ELEMENTARY MECHANICS ($49.95)
Control Data

This program tests and evaluates a student's reasoning skills annd knowledge of the principles of mechanics. Simulated physical situations are presented in an animated format and a question is posed about the situation portrayed. The student is encouraged to solve the problem with the least possible help and information. Nine separate problems are presented. If the student is unable to solve the problem, the answer is provided.

CIRCUITS: LOGICAL INFERENCE ($39.95)
Control Data

Circuits make a wiring diagram in the back of a board and allows students to test for possible connections. A light bulb lights if a test completes a circuit. There are three levels of activities: determining connections, optimising methods and deducing formal properties.

OH, DEER! ($49.95)
Control Data

This program allows the students to manage a herd of white-tailed deer. During a five year period students make a series of decisions necessary to maintain a herd size which is in balance with natural environment and humam tolerance. This scenario allows students to experience the social pressures as well as the effect of control measures on the herd.

CLASSIFICATION ($49.95)
Control Data

This module uses a simple data base inquiry system to enter, search and sort data. Both the process and results of this activity are closely related to the process of scientific classification.

CREATE A TEST - PROGRAM DISK $89.95 (Question Disks $49.95)
Edusoft

A computer program for making tests including true-false, multiple choice, fill -in blanks, matching and problem solving. Question disks available include Chemistry, Biology, Physics and Junior Science.

ENZKIN - ENZYME KINETICS ($39.95)
Edward Arnold

Allows the student to plan and interpret the results from a wide range of simulated investigations.

CMPETE - PLANT COMPETITION ($39.95)
Edward Arnold

This simulation allows students to study competition between barley, oats and tall and dwarf peas during the second and third months of their development. Both inter and intraspecific competition can be studied and the results compared with real experimental data.

EVOLUT - EVOLUTION AND NATURAL SELECTION ($39.95)
Edward Arnold

This simulation allows the student to investigate many generations under different selection conditions in a short period of time.

LNKOVR - GENETIC MAPPING ($39.95)
Edward Arnold

The student specifies a series of genetic crosses and from the resulting data builds up a linkage map for ten genes of a hypothetical diploid species using the three-point testcross technique.

COXIST - POPULATION DYNAMICS ($39.95)
Edward Arnold

A simulated study of population growth curves of either different species competing for limited resources or single species growing in isolation.

RKINET - REACTION KINETICS ($39.95)
Edward Arnold

This simulation allows the student to investigate typical experimental results to discover about first and second order reactions, rate constants, concentrations and the effect of the variation of temperature.

HABER - AMMONIA SYNTHESIS ($39.95)
Edward Arnold

A simulation using mathematical model of the Haber process designed to enable the student to discover how the various conditions influence the course of the reaction.

INTERP - INTERFERENCE AND DIFFRACTION OF WAVES ($39.95)
Edward Arnold

Allows students to investigate two slit interference patterns.

NEWTON - SATELLITE ORBITS ($39.95)
Edward Arnold

This simulation encourages students to think about the relationships between models and the physical phenomena these models "explain" using Newton's Law of Gravitation and his Second Law of Motion

SCATT 1,2, AND 3 - PARTICLE SCATTERING ($39.95)
Edward Arnold

SCATT is a simulation of alpha particle scattering by metal foil.

* CLASSIFICATION GAME - ANIMALS ($25)
Gemini Software

Student practice of classification by asking questions to identify an animal, insect, bird, etc from a list of 36 vertebrates and invertebrates.

* CLASSIFICATION GAME - GENERAL ($25)
Gemini Software

Allows a teacher to establish a list of questions, and sets of answers, to enable students to identify mystery items, be they chemicals, countries or foods.

APPROXIMATION, ESTIMATION, AND STANDARD FORM ($49.50)
Heinemann

This program is to develop mathematical skills. Randomly generated questions are presented in the chosen subject area. The level of difficulty may be adjusted.

MICROCOMPUTERS IN SCIENCE TEACHING ($49.50)
Heinemann

This package contains all the major programs from the book of the same name by R.A. Sparkes. Many of the examples use fast machine code graphics. This diskette may be used in conjunction with the book but may also be used independently in the teaching situation.

SCALES ($49.50)
Heinemann

This program allows practice with readings on various devices, including the thermometer, measuring cylinder, burette, ammeter, stop-watch, vernier scale or micrometer screw guage.

PHYSIOLOGICAL SIMULATION ($49.50)
Heinemann

In this simulation the user acting as the brain has to keep the body alive while performing a series of physical activities. The sex, age, weight, vital capacity and blood volume are determined and then the user can vary the rate of breathing, breath volume and the sweating rate while the body performs up to three activities from a list of ten activities.

HYDROGEN SPECTRUM ($49.50)
Heinemann

The two programs in this package provide a dynamic model which may be used to illustrate the line emission spectrum of atomic hydrogen.

SYMBOLS TO MOLES ($49.50)
Heinemann

This program has 14 levels, from questions requiring simple recall of chemical symbols and valency, through deduction of chemical formulae, equation writing to the calculation of numbers of moles of substance in a given mass or volume of solution.

MICROELECTRONICS ($49.50 - coming)
Heinemann

The user designs and tests digital circuits by connecting together standard logic gates. Once tested, these complete circuits are incorporated as "black boxes" in more complicated circuits.

LENSES ($49.50)
Heinemann

This program simulates rays of light from a ray box or a laser incident on a lens or mirror. The rays may be scanned up and down to clarify the idea of image formation.

TRANSVERSE WAVES ($49.50)
Heinemann

This program allows the user to control velocity, amplitude, wavelength and thus investigate interference, reflection and other wave functions.

LONGITUDINAL WAVES ($49.50)
Heinemann

Similar to Transverse Waves, described above.

YOUNG'S SLITS ($49.50)
Heinemann

This program provides a dynamic model of Young's experiment, allowing the amplitude and wavelength of the source waves, separation of the slits and position of convergence to be varied.

* EXPERIMENTS CONTROLLED AND MONITORED BY THE COMPUTER
ICITACS

Chemistry - Stoichiometry, titration and titration curves
Physics - Simple pendulum: relationships between gravity, length of the pendulum and period
Biology - Fermentation experiments: temperature control and monitoring with result storage, retrieval and comparison capabilities.

GEOLOGY SEARCH ($225)
McGraw-Hill

Sends students to explore for oil. Students learn about rocks, fossils and underground structures in order to make decisions on drilling. The program comes with a teachers manual, 20 reorderable student handbooks and a diskette which also handles record keeping.

ENERGY SEARCH ($225)
McGraw-Hill

Students manage an energy factory and recreate steps taken in the search of new energy sources. The program comes with a teachers manual, 20 reorderable student handbooks and a diskette which also handles record keeping.

BASIC CONCEPTS OF ELECTRICITY SERIES ($118.60 each)
Mastery Education

Series 1: Basic Concepts.
Reviews the concept of electric charge, explains the nature of electric current, and explains the meaning of electric potential difference.

Series 2: Introduction to Circuits.
Teaches the difference between parallel and series connections, the basic concepts concerning the current in series and parallel circuits, and the concepts involving potential difference in series and parallel circuits.

Series 3: Resistance
Experiments with the computer are to discover Ohm's Law. Problem solving is performed using the equation V=I/R. Qualitative concepts concerning effective resistance in series and parallel circuits are taught.

Series 4: Electrical Energy
The equation E=VIT is derived. Reviews the concept of power as the rate of use of energy. Introduces the unit of the kilowatt-hour.

WAVES AND VIBRATIONS ($195.60)
Mastery Education

These programs teach the concepts of periodic motion, cycle, longitudinal and transverse vibration, amplitude, phase, period and frequency.

Waves in a linear medium:
Examination of the nature of wave pulses in a medium.
Exploration of constructive and destructive interference of pulses.

Periodic waves:
Introduction of wavelength, amplitude, period, and frequency
Analysis of the production of standing waves on a stretched spring.

Longitudinal Wave Demonstration
Demonstration of both single pulses and periodic longitudinal waves moving along a spring.

CHEMICAL NOMENCLATURE ($100)
Mastery Education

This package consists of four programs. Firstly, Organic Compound Nomenclature displays a choice of nine different types of organic compounds (e.g. alkene, aromatic, ester, amine, etc. Hydrocarbon Nomenclature, randomly creates alkanes and asks for the IUPAC name. Inorganic Nomenclature (name to formula) the student is given the name of a binary compound or acid salt, and must type in the formula. Inorganic Nomenclature (formula to name), the student is given the formula and must type in the name of the compound.

GAS LAWS & KINETIC MOLECULAR THEORY ($143.85)
Mastery Education

Boyle's Law - A simulated experiment.
Charles' Law - A simulated experiment.
Gas Law Drill - Provides drill in mathematical and non-mathematical gas law problems.
Equilibrium - To learn how temperature and pressure affect the equilibrium.

BIOLOGY: CELLULAR REPRODUCTION ($72.15)
Mastery Education

This program consists of two sections mitosis and meiosis. The program starts with a review of the relevant cell structures, followed by: an animated demonstration of the processes of cellular reproduction and a step-by-step introduction of the names for the various stages of mitosis and meiosis. The lesson material is followed by two tests.

BIOLOGY: MENDELIAN GENETICS ($72.15)
Mastery Education

The first of the two lessons covers dominance, genes, phenotypes and genotypes. Monohybrid crosses are demonstrated. Hypotheses are explored that explain the phenotype ratios in successive generations, and one of Mendel's classic experiments is simulated and analysed, followed by a short pictorial quiz.

ASTRONOMY: STARS FOR ALL SEASONS ($49.95)
Micro Nationwide

This program allows users to view constellations in the northern hemisphere and observe seasonal changes. A section provides a graphic explanation of why we see different stars at different latitudes and at different times of the year.

WEATHER ($49.95)
Micro Nationwide

Three programs explore the major elements of weather including temperature, humidity and air pressure. The programs introduce the tools of meterology, including the workings of the thermometer, barometer, anamometer and wind vane.

CLASSIFICATION OF LIVING THINGS ($59.00)
Micro Nationwide

A program for grades 7 to 10 that begins with an analogy which illustrates the need for classificatioon and then a brief history is presented. The program also includes two special features: a classification "bank", and a glossary. The "bank" includes common as well as unusual plants and animals for easy reference and a detailed dichotomous key with an explanation of how to use it. The glossary contains all the words introduced in the program and may be accessed at any time.

INTRODUCTION TO BIOCHEMISTRY ($59.00)
Micro Nationwide

This program reviews and reinforces chemistry concepts necessary for an understanding of biochemistry. A management system keeps track of the students progress. Matter, elements, atoms, symbols and compounds are explained. This program also includes laboratory simulations and a glossary.

BIOCHEMISTRY ($115.00 for two, or $69.00 each)
Micro Nationwide

This program allows the student to run simulated experiments.It explains the formation of compounds, explores graphically inorganic compounds in living matter, and discusses and constructs the nucleic acids. The chemical composition, properties and functions of carbohydrates, lipids, and proteins are described in detail.

CHEMISTRY: FORMULAE AND NAMES OF INGORGANIC COMPOUNDS ($39.95)
Micro Nationwide

This program allows the student to name a compound, give a formula, or write the formula. The full list of symbols and valences can be called up whenever the student needs it. All problems are randomly generated, and a management system keeps track of students' scores.

CELLS ($49.95)
Micro Nationwide

There are two programs on the diskette suitable for grades 3 to 9:

1. Basic Cell Structure - the basic parts of a cell are introduced including cell membrane, cytoplasm and nucleus. In the graphic presentation small particles are shown to pass through a cell membrane while larger particles are kept out.

2. Cell Division (Binary Fission) - cell reproduction by binary fission is explored in a step-by-step animated view of mitosis, cell membrane expansion and pinching together to form two daughter cells.

PARTS OF THE MICROSCOPE ($29.95)
Micro Nationwide

Teaches the student to identify various parts of a microscope.

SIMPLE MACHINES (MACHINES WITHOUT MOTORS)
Micro Nationwide

Terms such as energy, force, resistance and effort as well as the Law of Machines is presented in the introduction. Students study each of the simple machines, lever, screw, wheel and axle, inclined plane, wedge and pulley.

HEART LAB ($39.95)
Micro Nationwide

This program uses animated graphics to produce a simulation of the heart in action. The program is divided into three sections:
1. Tutorial- identify locations of the various chambers and vessels.
2. Drill- student identifies the chambers and vessels.
3. Pulse Simulation Exercise- demontrates how the heart responds to work.

SCIENCE CONTENT AREA READING ($239.00 for 5 disks)
Micro Nationwide

These programs aim to give students mastery in reading science material. Each disk contains four passages of about 300 words. Each passage contains seven deletions providing practice in cloze.

GENETICS
Micro Natiowide

A study of the tranmission of traits from generation to generation.
Disk 1- presents the Mendelian Principles, Gene-Chromosome Theory, and major genetic concepts.
Disk 2- presents Human Heredity and Genetically Related Disorders and Modern Genetics.

TELLSTAR ($129.00)
Ramware

An astronomy package showing the sky on any day at any place on the earth.

ECOLOGICAL MODELLING ($88)
Science Education Resources

Techniques for modelling ecological systems and processes. By controlling initial population, growth rate and length of the simulation, students may test hypotheses and predict results about ecosystems.

TRIBBLES - SCIENTIFIC METHOD ($47)
Science Education Resources

Consists of a written tutorial and computer simulation which takes place on an alien planet inhabited by tribbles. The tutorial ppresents students with a problem and guides them to its solution. The simulation provides the data for making observations and testing predictions.

OSMOTIC PRESSURE ($59)
Science Education Resources

A package to explore osmosis and osmotic pressure. The first program includes several simulations using a computer graphics thistle tube. The second program is an animation of a molecular model for osmosis.

CATLAB ($75)
Science Education Resources

A genetics simulation allowing students to mate domestic cats selected by coat colour and pattern. The program produces genetically valid litters of kittens based on these matings. Several sample investigations are suggested in the Student Guide. The package contains the Student Guide, Instructor Guide, 8 slides and diskette.

CHOLES ($35)
Science Education Resources

A data base of cholesterol content of 170 Australian foods. Diets may be entered for analysis. The package contains a Teacher's Guide and diskette.

HERIDITARY DOG ($49.50)
Science Education Resources

A introduction to the principles of inheritance designed for both Junior and Senior secondary. The program includes a tutorial and five single-gene and five two-gene simulations. May also be used to study the binomial theorem and probability in Mathematics.

GENE MATCHING ($49.50)
Science Education Resources

This program allows for interactive investigation of base pairing and contains a section on DNA and RNA. The second section allows students to enter in RNA codons and to synthesize a polypeptide chain.

BIRDBREED ($59.50)
Science Education Resources

Allows investigation of genetic principles involved in the inheritance of colour variants in the budgerigar. The first of the four levels deals with monohybrid inheritance. Other concepts are introduced in the higher levels. These include incomplete dominance, sex linkage, multiple alleles, dihybrid crosses, gene interaction and linkage. A detailed Teacher Guide and Student Guide are included.

IDGAME - ORGANIC CHEMISTRY ($88)
Science Education Resources

This game allows students to practice strategies for identifying organic compounds. The program is based on a data base of 41 test results for 33 organic compounds. The instructor selects compounds from the data base and assigns them as unknowns to obtain simulated laboratory test results. The program keeps track of the test students request, thus allowing the instructor to audit the students' use of the program. Includes Instructor Guide, Student Guide and diskette.

KINETICS ($39.50)
Science Education Resources

A simulation of an introductory chemistry laboratory on the factors influencing the rate of a reaction. Includes Teacher Notes and diskette.

VOLAB - ACID-BASE TITRATIONS ($49.50)
Science Education Resources

These programs allow the user to control a number of parameters and plots pH versus Volume of Titrant curves for seven acid-base titration systems. The package contains a comprehensive User Guide suggesting a range of activities and a diskette.

GROUP VELOCITY ($53)
Science Education Resources

Students use game paddles to control wave velocity and wave length to demonstrate a travelling sine wave and two types of wave groups by controlling wave velocity and group velocity. Students select values for frequency, time and wave number to display velocity , oscillation, cosine waves, moving waves and group waves.

INTRODUCTORY MECHANICS FOR THE APPLE II ($65)
Science Education Resources

The program focusses on the application of Newton's Second Law to the simple harmonic oscillator and to the motion of particles in two dimensions, under the influencs of uniform fields or one or more force centres. The exercises and examples emphasize problem solving and use graphics throughout.

MECC SCIENCE - VOLUME 2 ($27 or $24 cash)
Seasen Software

PEST deals with the use of pesticides
CELL MEMBRANE in which the user takes the part of a cell
SNELL plots light refraction demonstrating Snell's law
COLLIDE simulates the collision between two bodies
DIFFUSION deals with the diffusion rates of various gases
NUCLEAR SIMULATION shows the radioactive decay of nine different radioisotopes
ICBM and RADAR teachers angles and projections on a coordinate system

MECC SCIENCE - VOLUME 3 ($27 or $24 cash)
Seasen Software

FISH shows the circulatory system of a fish
ODELL LAKE explores food chains
URSA teachers about constellations
QUAKES simulates earthquakes
MINERALS can be used to identify 29 numerals by having students perform simple tests

MECC SCIENCE - VOLUME 4 ($27 or $24 cash)
Seasen Software

These programs were designed for teacher demonstrations of solubility, gas laws and electrical charges. DEFINITION, SOLUBILITY PRODUCTS and PRECIPITATES cover solubility. The gas law programs are CHARLES' LAW and BOYLE'S LAW and ELECTRON CHARGE is based on the Miliken Oil Drop experiment.

ANTARCTIC DATA BASE ($35)
Tasmania Media Centre

Contains a set of 636 observations of seabirds seen during an Australian National Antarctic Research Expedition voyage between November and December 1982. Students will be able to make hypotheses and then examine the evidence to test their validity. The package provides several different ways of presenting the information. Data may simply be displayed or be shown using one of three graphing option.

24. SOFTWARE IN OTHER SUBJECT AREAS FOR THE APPLE II FAMILY

ADAPTIVE AIDS FOR THE DISABLED

Peripheral hardware for the Apple to aid children with physical handicaps, especially cerebal palsy.

SUPERPILOT
Apple Computer

A powerful authoring language allowing teachers to produce learning materials combining text, graphics and sound without the need to be an expert programmer.

* THE SPRITE CARD ($310)
Australian Video Presentations

The Sprite interface card for the Apple together with the software allows the Apple to support sprites on 32 different planes. A sprite is a graphical object whose shape may be defined by the user and which may be positioned on the screen using coordinates. The shape may then be animated by programming a change in the value of the coordinates. The sprites are driven by an animation language, Spritesoft, which is presently driven through BASIC but will be extended to support LOGO.

* MULTIUSER SYSTEM ($18)
Bartlett, Mr W.D.

The package contains a formatting routine designed to set up a disk whose directory is divided into 7 separate accounts. Each account is accessed by giving its account number and password. 7 students may share the same disk and illustrates the idea of security.

BUILDING RELATIONSHIPS ($94.95)
Control Data

The course is designed to help people improve their relationships with others. Four categories of relationship are considered: personal, societal, employment and family. Designed for teenagers and young adults.

COMMUNICATION SKILLS ($94.95)
Control Data

Participants study what communication is and how to tell good communication from poor. Users take a look at their own skills and communication patterns and study techniques for improving communication.

FORMING POSITIVE BEHAVIOUR ($79.95)
Control Data

The program helps individuals to recognise their own behaviour patterns and discover techniques to eliminate those which cause problems.

INCREASING SELF-ESTEEM ($64.95)
Control Data

The course encourages participants to examine how they feel about themselves and how those feelings have developed. They study simple techniques fro coping with negative feelings of "self-worth" and discover how to counteract negative feelings before they appear.

ART - PERSPECTIVE DRAWING ($49.95)
Control Data

This program provides sequential and self-paced instruction in the study of one and two-point perspective. Problems are illustrated and terminology is explained through computer graphics.

BLISSYMBOLICS: BLISSYMBOL CONCEPTS ($49.95)
Control Data

The package contains six drills on specific blissymbols. FLAG, EYE, JUMP and CAR provide practice on the concept of left/right directions. MOUSE is a program which describes the spatial location of objects. BALLOON give practice in describing size and quantity.

ELEMENTARY VOLUME 13 - NUTRITION ($49.95)
Control Data

Students can analyse their food intake and activity level with these programs. NUTRIENTS enables students to enter the actual foods they eat and see a graphic representation of the eight nutrients they contain. CALORIES compares the calories consumed with the calories used in activity. CALORIE BANK introduces students to nutrition through a short animated sequence.

THE SEVEN CITIES OF GOLD (new for '85)
Control Data

A historical simulation in the Age of Discovery, Exploration and Conquest (1492-1540) set in Spain. Over 2800 screens represent the worlds you'll explore building computer maps as you go. In the historical game you'll create an accurate map of the geography and populations of the 16th Century North, South and Central America. But the package will also allow you to face random continents.

COGNITIVE REHABILITATION ($595)
Dataflow

The four programs were developed to address the variety of organizational deficits which typically result from traumatic brain injury and other neurologic impairments. The package includes a fifth disk which is the authoring program. The first of the four programs, Categorization, provides 11 lessons of categorization activities. The second, Sequencing offers 12 individual lessons covering sequencing from simple numerical sequencing to verbal sequencing. Association, provides 10 lessons ranging from simple association to analogous reasoning. Memory, offers a variety of recognition and recall activities in 13 different lessons. The authoring program provides an easy-to-use format for expanding or individualising activities from the four core disks.

NUTRITION VOLUME 1 ($59.95)
Edsoft

FOOD INTAKE ANALYSIS helps students learn the importance of a balanced diet by performing a quick, accurate nutritional analysis of foods comsumed by an individual in a 24-hour period. The support manual contains a food catalogue of 598 items , a food diary, nutrijtion report, evaluation and a menu plan.

NUTRITION VOLUME 2 ($49.95)
Edsoft

The programs are suitable for senior high school students as an aid to understanding food composition and the function of nutrients in body processes and activities. Using, LEAN students can calculate their caloric intake and see its relationship to the energy they expend over a one or three-day period. With RECIPE, they can determine how a list of foods meet recommended amounts from calories and nutrients.

* G - PASCAL ($85.00)
Gambit Games

This is a high-speed Pascal subset compiler for the Apple II. It contains a compiler, text editor and interpreter and compiles at over 6000 lines per minute.

PHYSIOLOGICAL SIMULATION ($49.50)
Hienemann

In this simulation of an active human, the user, representing the brain, has to keep the body alive while performing a series of physical activities. Once the sex, age, weight, vital capacity and blood volume of the person have been determined, the brain can vary the rate of breathing, the breath volume and the sweating rate while the human performs up to three different activities.

* MEDIEVAL TOWN (public domain)
N.S.W.C.E.G.

This is a historical simulation based in medieval times for the high school student.

* TRADE (public domain)
N.S.W.C.E.G.

A historical simulation suitable for high school students.

* DEVELOPING LIVING SKILLS ($50.00)
Prologic

This simulation game takes individuals or groups of students through the experience of living independently for one year. They work and carry out social activities, by making decisions from random choices prompted by the computer. At the end of the period they can assess their financial and social status. The aim is to survive financially for a year while facing all the temptations, tribulations and rewards present in real life. Because of the random elements in the program it is unlikely that two uses will get the same result.

* DESIGNING AN ENERGY-EFFICIENT HOME ($50.00)
Prologic

This program allows students to design and construct a theoretical house. Students draw up their design on the computer and make decisions about the locations, orientation, building materials, roofing, flooring, insulation and window shading. Extensive use is made of graphics. The students' design and construction decisions are assessed by the computer and a breakdown of the house energy balance is given.

THE TALKING APPLE (about $3600)
Quantum Engineering Design Pty Ltd

The system works with an Apple IIe, an Echo II speech synthesiser which fits entirely inside the cabinet of the Apple and a small speaker with a volume control and headphone jack. As each letter is typed the computer speaks the letter and when the operator is finished the computer will read the text back again.

HI-RES ARCHITECTURAL DESIGN
HI-RES ELECTRONIC DESIGN
HI-RES LANDSCAPE DESIGN
HI-RES INTERIOR DESIGN
Ramware

These design programs make extensive use of high-resolution graphics and are suitable for high school and post secondary education.

DEMO-GRAPHICS ($99.00)
Science Education Resources

Demography, population grwoth and change - these programs can be used to present current and historical demographic data for many nations: project multi-national populations given current trends; and facilitate inderstanding of demographic dynamics and the impact of both real and simulated factors affecting the growth of world populations. The programs include 1980 data on population, fertility and mortality for 40 countries.

SAMP - SURVEY SAMPLING ($82.50)
Science Education Resources

Survey sampling, public opinion, social science research and statistics. Using this simulation students can put into practice the theory and procedures for sampling and compare and discuss the merits of four different sampling designs: simple random, stratified, cluster and quota-sampling. Students select the design and the number of respondents; the program "samples" the population and reports back the results of administering the survey. The program reports information on the cost of administering the surveys so that students can see the financial implications of their choices.

DIFFUSION GAME ($65.00)
Science Education Resources

This interactive computer game helps students learn about the diffusion of innovations, particularly the role of change agents in securing the adoption of the innovation. The game emphasises the value of the management approach to effecting a desired behaviour change in a target population. The target population is rural villagers who must be motivated to adopt the innovation.

SECTION B: ADDRESSES

ADDRESSES FOR DISTRIBUTORS OF EDUCATIONAL SOFTWARE AND HARDWARE

AARDVARK SOFTWARE
P.O. Box 120
Kingswood, S.A. 5062
Olympic Database

ACTIVE LEARNING SYSTEMS
P.O. BOX 86
Byron Bay, NSW 2481
(066) 857858
One World Countries Database
Hometown - A local area study
Australia - A profile

ADAPTIVE AIDS FOR THE DISABLED
189 Allambie Rd
Allambie Heights, NSW
(02) 451 9022
Aids for Handicapped persons

ADDISON WESLEY
6 Byfield St.
North Ryde, NSW 2113
(02) 888 2733
Maths Activities K to 9
Computer Applications Project
Administration software
Software for Girls

ANGLE PARK COMPUTING CENTRE
Trafford St.
Angle Park, S.A. 5010
(08) 268 5666
Maths, Science
Utilities

APPLE COMPUTER AUSTRALIA
37 Waterloo Rd.
North Ryde, NSW 2113
(02) 888 5888
Apple Logo, AppleWorks
AppleWriter, Apple Pilot
Apple Super Pilot

ASHTRON SOFTWARE
P.O. Box 579
Gosford, NSW 2250
(043) 28 3555
Bank Street Writer
Sterling Swift
Wide range of software
Power Pad, Classroom Computing

AUSTRALIAN VIDEO PRESENTATIONS
325-7 Bank St,
Sth Melbourne, VIC 3205
(03) 699 4177
Sprite Interface Card

BARTLETT, MR W.D.
322 Nelson Rd.
Mt Nelson, Tas. 7007
(002) 251755
Maths, Music Software
Teacher Utilities
AppleVet

BISHOP, MR M.
10/24 Balfour Rd.
Rose Bay, NSW 2029
Keyboarding Program

BRITANNICA EDUCATION SERVICES
22 Lambs Rd.
Artarmon, NSW 2064
(02) 438 4544
Maths games K to 8
Maths instruction K to 8
Milliken Word Processor

CARESOFT
c/- Denistone East P. S.
Lovell Rd.
Eastwood, NSW 2122
(02) 85 6678

Telling the Time Program
Remedial Reading Programs

CCH AUST. LTD.
P.O. Box 230
North Ryde, NSW 2113
(02) 888 2555

Workshops in Computer Studies

CHEMISTRY ASSOCIATES
P.O. Box 254
Mentone, Vic. 3194
(03) 560 7742

Secondary chemistry

CHOPPING, MR E.
P.O. Box 856
Dubbo, NSW 2830
(068) 82 6908

Analysis of Text Readibility
Adventure game writer
Computer Diary

COMPUMUSIC
103 St. Johns Rd
Glebe, NSW 2037
(02) 692 9875

Hardware & software to provide advanced musical capabilities with the Apple
Syntauri - Simply Music
Mountain Music

COMPUTER COGNITION
P.O. Box 2164
North Parramatta, NSW 2151
(02) 724 4847

Maths invaders
BASIC programming
Music theory

COMPUTER PROGRAMS, M & S
80 South Terrace
Adelaide, S.A. 5000
(08) 212 7535

SMART - The cash computer
Stock, banking & accounting

COMPUTER TUTOR
5/191 Victoria Rd.
Gladesville, NSW 2111
(02) 816 3178

Tutorial Programs in Algebra & Grammar

CONTROL DATA PUBLISHING
493 St. Kilda Rd.
Melbourne, Vic. 3004
(03) 268 9500

Plato, MECC Software
Electronic Art
Macintosh - business simulations

CONSOLIDATED SOFTWARE DEV.
P.O. Box 607
North Sydney, NSW 2060
(02) 922 2744

Computer managed testing system

DATAFLOW
6-8 Elizabeth St.
Burwood, NSW 2134
(02) 745 3303

Direct Helper - Remedial reading
DLM Infants, Maths & Word Programs
Hartley software, Volcanoes, Star Search
Tabletime - Time Table Program

DIOCESAN SPEC EDUC CENTRE
P.O. Box 345
Sth Wagga Wagga, NSW 2650
(069) 254492

Computer Fun Disks

DOMINIE PTY LTD
8 Cross St
Brookvale, NSW 2100
(02) 93 0307

Range of educational software

EDSOFT
P.O. Box 314
Blackburn, Vic. 3130
(03) 878 4746

Sunburst Software
Counterpoint
Special Education
All areas K to tertiary

EDUSOFT
P.O. Box 252
Forestville, NSW 2087
(02) 451 6243

Administration
Multilingual Word Processing
Maths, English, Music
Special Ed, Remedial Reading

EDWARD ARNOLD
80 Waverley Rd.
Caulfield East, Vic. 3145
(03) 572 2211

Senior Physics
Senior Chemistry
Senior Biology

EUREKA SOFTWARE
P.O. Box 1782
Cairns, QLD 4870
(070) 55 7056

Primary Mathematics
Comprehension and Cloze

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